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EFFECT OF THE DROUGHT ON THE MISSISSIPPI RIVER

HEARING

BEFORE THE

SUBCOMMITTEE ON MERCHANT MARINE

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

SECOND SESSION

ON

THE EFFECT OF THE DROUGHT ON THE MISSISSIPPI RIVER SHIPPING CONDITIONS

JULY 14, 1988

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EFFECT OF THE DROUGHT ON THE MISSISSIPPI RIVER

THURSDAY, JULY 14, 1988

U.S. SENATE,
SUBCOMMITTEE ON MERCHANT MARINE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, D.C.

The Committee met, pursuant to notice, at 2:07 p.m., in room SR-253, Russell Senate Office Building, Hon. John B. Breaux [chairman of the subcommittee] presiding.

Staff members assigned to this hearing: Barry Kalinsky, staff counsel; and Bob Eisenbud, minority professional staff member.

OPENING STATEMENT BY SENATOR BREAUX

Senator BREAUX. The Subcommittee will please come to order.

The purpose of this afternoon's hearing is to examine the effect of the unprecedented drought on the Mississippi River shipping conditions.

While evening news has given widespread coverage to the plight of the barge and the towing industry, Congressional attention has thus far concentrated on the agricultural and other ramifications of the drought.

Our hearing this afternoon is the first to focus on the drought's effect on the river transportation systems and the shippers and the consumers who depend on it. The Mississippi River represents the most important shipping route through America's heartland and provides an essential link in the chain of our international commerce.

Because of the lack of rain, the meandering Mississippi River is running low and slow. Some say that the mighty Mississippi River is mighty no more. A quick summary of the water levels along the Mississippi outlines the severity of the problem.

In ST. Louis, Missouri, the river is 14 feet below the mean July average. In Cairo, Illinois, the river is down 18 feet. In Memphis, Tennessee, the levels are down some 23 feet, breaking all low water levels dating back to 1872.

At barely nine feet deep, as much as 20 feet below normal, and the minimum draw required for a fully-loaded barge, the shipping channel here has never been so spare. Normally 300 feet wide, it has narrowed to 175 feet in some places. And the United States Army Corps of Engineers has closed parts of the river on occasion.

Additionally, the below normal river flow has spurred the advance of salt water from the Gulf of Mexico and caused some localized water quality inputs in many parts of Louisiana. The economic impact of this natural disaster is staggering to many industries and is affecting the economy of our entire Nation.

For example, the worsening situation is having a disastrous impact on our Nation's barge and towing industry, just when the river transportation was emerging from a seven-year depression.

The barge and towing industry transports 57 percent of all grain bound for export, 40 percent of all petroleum products, and 20 percent of all the coal that is produced in the United States.

Barge transportation is popular because it is efficient and it is reasonable. One towboat can push up to 40 barges and in turn one barge holds the cargo of about 15 railroad cars or more than 60 trucks.

However, record low water levels are literally bringing barge traffic on the Mississippi to a halt. Up and down the river we have heard the accounts of grounded barges. While some passengers of the river have been cleared, as many as 3,000 barges have been blocked because of the record low water levels.

Several large barge companies are forecasting losses in the range of $1 million to $7 million per month because of the drought.

I am extremely pleased to see that the Federal agencies', like the Coast Guard and the Army Corps of Engineers, strong commitment to keep the river open and navigable as well as protecting the water quality and the supply.

However it is imperative that all Federal officials managing the crisis stay closely coordinated at all levels in order to mitigate the potential damage the crisis has the potential to cause.

Furthermore, I am extremely interested in exploring the feasibility and the legal ramifications of the plan being studied by the Corps of Engineers, which could divert water from Lake Michigan into the Mississippi River.

The plan has received a great deal of attention and should receive due consideration if authorities believe that water diversion is a meritorious solution to the problem of the low water levels.

Experts predict that if the drought continues well into July crop yield losses will be severe, thus raising consumer food prices. In addition, continuation of the drought would further disrupt barge transportation, raising the prices of all commodities moving by all modes of transportation. Also, communities would begin to suffer severe effects of diminished water supplies.

Commercial waterways of the United States play a critical role in our Nation's economic well-being, and we must endeavor to keep the Mississippi River open to navigation. America and the world simply cannot afford for the Mississippi to run dry.

With that I recognize our distinguished colleague from Missouri, Senator Danforth, for any comments he may have.

OPENING STATEMENT BY SENATOR DANFORTH

Senator DANFORTH. Mr. Chairman, I also want to express my appreciation to you for convening this meeting. I want to express my appreciation to Senator Sasser for the role that he has played in calling our attention to the state of the Mississippi River.

There has been much commentary about the drought, about the devastating effect that it has had on agriculture, and it is timely to focus not only on the farmland, itself, but on the drought's effects on getting America's agricultural production to market.

Anyone who has read Tom Sawyer and Huck Finn knows the importance of the Mississippi River to the culture of the Midwest. But its importance is more than just cultural, it is also economic.

When you consider my state of Missouri and its main population centers, it is notable how many of them are located where they are because of the rivers. Kansas City and St. Louis are both located on rivers, as are smaller and medium-sized cities such as St. Joseph, Jefferson City, Hannibal. They are all located on rivers and all for a reason. The rivers play a major role in the economy of our part of the country.

Since I have been in the Senate, maintaining river inland waterway systems has been a real challenge. First we fought the battle of the user fees. That was a long drawn-out fight. We basically fought it to a draw. There are user fees now, but we kept them to a minimum.

Then we had the effect of our tax laws. There was a time when it seemed that every dentist in the country owned a barge, and this had the effect of depressing the barge industry.

There was a glut. And we had a situation in our state where barge companies that had been in the same families for generations were bankrupt.

And now things had begun to look up for the inland waterway system and for the barge industry, only to have the drought hit, with its effects on agriculture and on the river itself.

What happens to the Mississippi River affects not only the eastern part of our state but it affects the whole state, because barge transportation starts from northwest Missouri, goes through Kansas City, across the state, the Missouri River, and into the Mississippi River.

My understanding is that the Missouri River is in fairly good shape, but when the barges hit St. Louis and the Mississippi River, the trouble begins.

At Cape Girardeau, Missouri, now, the depth of the Mississippi River is five feet. And we are relying on the Corps of Engineers to do dredging to allow any barge transportation to exist at all.

Senator Sasser has made his proposal with respect to diverting water from the Great Lakes. I think that is a sound proposal. Perhaps there are other things that we could be doing also. I look forward to hearing the witnesses and finding out their ideas.

Mr. Chairman, I am very pleased to attend this hearing on the effects of the drought on Mississippi River shipping conditions. To the best of

my knowledge, this is the first hearing to deal with this important subject, and I thank you for convening it.

You and I know the critical importance of the Mississippi River system to our states and the nation as a whole, Mr. Chairman. Under normal conditions, the River is a highly efficient highway, on which thousands of barges carry more than 200 million tons of grain, chemicals, and other products along the more than 1,800 miles between Minneapolis and New Orleans.

In addition, the River system is the source of water for drinking, crop irrigation, cooling for electric power plants and manufacturing facilities, and it provides recreational boating, swimming, and fishing opportunities for millions of people.

Because of the drought, the River is at or near record low levels. As a result, the usually efficient barges are moving with lighter loads, or not moving at all until the Corps of Engineers is able to dredge the channels deeper. Barge traffic and associated activities are far below normal and necessary levels at St. Louis and other ports. Rail and truck services simply cannot meet the demands created by the slowdown and backlogs.

Public drinking water supply is also a problem. Many municipalities depend on the River as their main source of drinking water. The water level at Cape Girardeau, for example, is now less than five feet, compared to an average level of 20 feet. The water intake is at three and one-half feet, and local officials are understandably concerned. Excessive algal blooms and other water quality problems have arisen with the low levels and water flow. St. Louis is spending an additional $1,000 each day for chemical additives to ensure water quality. To make matters worse, the chemicals must be brought to St. Louis by barges, and officials are concerned that they may not be able to get more when they need them.

I have received a number of letters from constituents detailing the problems they face as the River level falls, Mr. Chairman. I would ask that they be included in the record of this hearing.

The ultimate solution to our problems, of course, is lots of rain. In the meantime, however, it seems to me that we can and must do everything possible to deal with these problems and prevent unnecessary hardship and suffering. I have joined with you and other senators, Mr. Chairman, in a letter urging the President to order an emergency diversion of water from the Great Lakes. I have also urged that representatives of the Department of Transportation be included in the Interagency Drought Policy Committee, and I'm pleased that this has been accomplished. The Maritime Administration and the Coast Guard are now able to present the needs of the barge industry and explore potential solutions with the other agencies dealing with the drought. There may be other steps that can be taken. I want to be sure they are considered.

We will hear from very distinguished and knowledgeable witnesses today. I am grateful to them for joining us on short notice to give us the latest information on the status of the situation and their efforts to

deal with it. I look forward to their testimony and to the opportunity to discuss with them the options for additional efforts.

Senator BREAUX. Thank you very much, Senator. As a note to all of our guests, the Senate Agriculture Committee, which has been focusing on the effect of the drought on farmers, this morning reported out legislation which is a major drought relief bill for farmers in this country.

And certainly the condition of the Mississippi River affects agricultural interests just as much as not having enough water in the ground does. Furthermore, it affects not only the whole country, it affects the whole world.

I have an opening statement that the Chairman, Senator Hollings would like to have included in the record.

[The statement follows:]

OPENING STATEMENT BY THE CHAIRMAN

I wish to congratulate the distinguished Subcommittee Chairman for scheduling this important hearing in such a timely manner. Our witnesses' this afternoon all have first-hand knowledge of the effects of the drought on the Mississippi.

The drought has developed into a national crisis of immeasurable proportions and unfortunately, no relief is in sight. The drought's effects are being felt in many areas of our everyday life including food prices, transportation systems, power generation, and water supplies.

The current drought situation is placing an extreme strain on the economy and well-being of the nation's heartland which is served by the Mississippi River. Water levels on the river have sunk to their lowest levels for this time of year since records were kept in 1872. If the drought continues, forecasters predict that the river could fall another 2 feet in a matter of days, putting it below the navigable level for most commercial vessels.

These low water levels, in turn, are creating a volatile atmosphere in the barge industry as well as the freight market. The barge and towing industry moves 15 percent of all U.S. freight shipments and is a major transporter of petroleum, grain, coal, and other bulk commodities. However, barge traffic on the waterways is being delayed and at some points virtually shut down due to the low water levels. The economic impact of this natural disaster is staggering. Several large barge companies are forecasting losses in the range of $1 million to $7 million per month of the drought.

The American Waterways Operators estimates that the total loss to the barge and towing industry due to the drought will exceed $60 million. Lighter loads on barges and the reduction of the number of barges being towed has chopped 25-30 percent from tug and barge industry revenues. Additionally, delays that can last three to four days increase operating costs from $21,000 to $42,000. If low water delays continue for the rest of the year, the cost of each lost hour would be devastating to the industry.

I hope the cooperation of the government agencies and the affected industries will continue in order to help manage this deepening crisis and respond with a united, coordinated effort.

It is essential to our international commerce to keep the Mississippi river open to navigation. Furthermore, we must also protect our water supply and quality and guard against unnecessary damage to the environment.

I look forward to receiving this afternoon's testimony.

Senator BREAUX. We are delighted to have as our leadoff first witness the Senator from Tennessee, who has raised the question of getting water for the Mississippi from the Great Lakes and has been a real leader in this discussion. We are delighted to have Senator Jim Sasser. Jim, we welcome your testimony.

STATEMENT OF HON. JAMES SASSER, U.S. SENATOR FROM TENNESSEE

Senator SASSER. Thank you very much, Mr. Chairman. I want to commend you for holding these hearings on the impact of drought on shipping conditions on the Mississippi River. This is one aspect of this very devastating national disaster which has not received much critical attention.

Just a few days ago I had the opportunity to overfly the Mississippi at Memphis in a helicopter with the commanding general of the Corps of Engineers, the Army Corps of Engineers, General Sands.

And I can say to you, Mr. Chairman, and to your distinguished ranking Member, Senator Danforth, that in Memphis, Tennessee, the mighty Mississippi is no longer mighty. It looks like the Rio Grande River in Texas. It is clear that we will have to carefully consider the full ramifications of just what is happening to navigation on the Mississippi and what we can do about it.

Now, the Corps of Engineers, under the direction of Secretary Page and General Sands, have done yeoman service in using their dredges to keep the Mississippi River clear in and around Memphis, Tennessee.

And it is true that we have seen some rain along the Mississippi in recent days. Praise the Lord, Memphis, Tennessee recently received nearly two inches of rain over the past two days. And rainfall in Memphis and elsewhere is expected to raise the level of the Mississippi by one to two feet by the middle of next week.

Now, that is cause for celebration. But it is certainly not cause to declare this case closed. We have got to acknowledge the facts. Without further rain, the river's level will simply drop once again and the long-term forecasts are not encouraging.

So we ought to take this rainfall for what it is, a temporary respite which has bought us some time. We need to realize that we could well be right back at record low levels on the Mississippi in a matter of days.

And as you indicated, Mr. Chairman, the Mississippi River at Memphis was at an all-time low, actually it was two to three feet lower than the all-time low measured in 1872.

Now, that is why I think, Mr. Chairman, that you and your distinguished ranking Member are right on the mark with these hearings today. We need to be exploring all long-term options for coping with this drought while we have perhaps the luxury of a little additional time.

One such option for the Mississippi River is an emergency diversion of water from the Great Lakes into the Illinois waterway and eventually into the Mississippi River.

Last week you, Mr. Chairman, along with Senator Danforth, joined me and 10 other of our colleagues in asking the President of the United States to direct the Corps of Engineers to undertake such a diversion of water from Lake Michigan into the Mississippi River.

Some of our colleagues from the Great Lakes region oppose this step. They question the authority for such action. Clearly there is precedent. This was done in the 1950s to relieve a drought condition at that time on the upper Mississippi River.

The diversion, which is ongoing on a daily basis, to the extent of 3,000 cubic feet per day, per second, was increased at that time, if memory serves me correctly, to 9,000 cubic feet per second and maintained for a number of days and had a substantial salutory effect. We were asking a diversion of 10,000 cubic feet per second, which was the customary rate of diversion during the 1920s and 1930s, I am advised.

Now, we pointed out in our letter to the President that there are legal complexities that are involved in such a diversion. While the President's authority for diversion seems plain to this Senator, a legal challenge can be mounted from the other side.

Today, and I have not had an opportunity to notify either you, Mr. Chairman, or Senator Danforth, I received a communication from the White House which confirms that the Department of the Army is expediting its inquiry into the diversion question with all of the legal ramifications that that might entail.

Frankly, I am very encouraged by that, and I would encourage the Army to proceed forthwith and to prepare to implement emergency diversion procedures in the event of a deepening drought crisis.

I think the facts are that we ought to be resolving these disputes now, while we still have some time. For one fact remains crystal clear, the longer we wait to deal with the problems on the Mississippi associated with the drought the greater the potential for damage exists.

We have vivid evidence of what we are trying to avoid. Some are estimating that the barge and towing industry, and you will hear more about this, I am sure, in your hearings, and I look forward to hearing it myself, has already lost almost $100 million due to the drought. And that is not just shipping costs that are involved.

I expect that witnesses today will discuss the health and safety costs associated with salt water getting into drinking water sources.

So in short, Mr. Chairman, it is clear there are several steps we can take to deal with this crisis. I think that looking closely at the option of an emergency diversion of water from the Great Lakes into the Mississippi is one vital step that we can take.

And again, Mr. Chairman, I commend you and Senator Danforth for focusing on this grave situation, and many of us in the Senate, including myself, are looking to you for leadership on this very critical issue. Thank you very much.

Senator BREAUX. Well, thank you very much, Senator Sasser, for taking the time to be with the Committee. We certainly welcome you, if your time permits, to sit up here and participate in the process of hearing the witnesses. Your leadership in this whole area has been something that we have all looked to and we will continue to do so.

Senator Danforth, any questions?

Senator DANFORTH. No questions.

Senator BREAUX. Thanks, Jim. We would like to welcome up as our first panel of witnesses, representing the Federal agencies, the Hon. John Gaughan, of course, who is Administrator of the Maritime Administration, Department of Transportation, as well as Rear Admiral Bill Leahy, who is Commander of the Second Coast Guard District from St. Louis, as well as Mr. Bob Page who is Assistant Secretary of the Army for Civil Works.

Gentlemen, if you would take your places at the witness table, and have your associates gather round, we would be pleased to take your testimony. John, we have you listed first. Do you want to take off and go?

STATEMENT OF HON. JOHN GAUGHAN, ADMINISTRATOR, MARITIME ADMINISTRATION, DEPARTMENT OF TRANSPORTATION; ACCOMPANIED BY WILLIAM A. CREELMAN, DEPUTY MARITIME ADMINISTRATOR; ROBERT SILBERMAN, DEPUTY MARITIME ADMINISTRATOR FOR INLAND WATERWAYS AND GREAT LAKES; AND VICE ADM. JACK COSTELLO, SECRETARY OF TRANSPORTATION'S PERSONAL REPRESENTATIVE, UNITED STATES COAST GUARD

Mr. GAUGHAN. Thank you very much, Mr. Chairman. First of all, Mr. Chairman, let me point out it is probably stating the obvious, but we thought the chart that shows the drought severity would be helpful for Members to understand how widespread the severe conditions and then the moderate conditions are.

Mr. Chairman, I appreciate the opportunity to appear before this subcommittee as you explore the effects of the drought on the inland waterway system.

I am accompanied by William Creelman, the Deputy Maritime Administrator, Robert Silberman, the Deputy Maritime Administrator for Inland Waterways and Great Lakes, and Vice Admiral Jack Costello, the Secretary of Transportation's personal representative to the Administration's interagency drought policy task force.

Mr. Chairman, I had the privilege of serving as the senior Department of Transportation representative on the interagency drought policy committee until Vice Admiral Costello's recent appointment.

This committee, which is made up of 14 government agencies, and chaired by Secretary of Agriculture Richard Lyng, has been meeting on a regular basis to serve as a clearinghouse of information regarding the broad-based effects of the current drought situation.

As you know, Secretary Lyng delivered an interim report on the drought situation to the President on June 30th. Later today he will be providing the President with the committee's latest assessment of the situation.

On behalf of Secretary Burnley, Vice Admiral Costello, my deputies, and I have begun the process of assessing both the near and long-term impact of the drought on the Nation's transportation system.

While the focus of this hearing is on the inland waterway situation, our in-house efforts are broader in that we are reviewing such items as the availability of railcars to move grain and the capability of the under-utilized Great LAKES/ST. Lawrence Seaway route to serve the needs of our exporters of grain should river conditions continue to deteriorate.

The Corps of Engineers and the Coast Guard are appearing with me today and should be able to provide specific information about the present conditions found on the various river systems.

We have been monitoring the situation, particularly in regard to the financial costs being imposed upon inland operators as a result of the river conditions.

The drought has caused low flows throughout our river system, requiring increased dredging to keep channels open and requiring reduced tow sizes and drafts.

Restrictions have also caused slower transit times and have required vessel operators to break up their tows and move smaller sections individually, a process called double or triple tripping. This technique is used in especially difficult areas, as well as alternating one-way traffic in the narrowest river reaches.

In some areas shallow water has prevented use of normal terminal facilities. The restrictions and slow-downs have caused increased costs for inland waterway operators and ultimately, their customers and the public.

Short-term market transportation rates have increased sharply as a result of low river conditions. But the spot market rates cover only a small percent of river movements while contract rates continue in force for a much larger percentage of river movements. In short, vessel operators are seeing much higher than normal costs and much longer trip times.

Mr. Chairman, as you pointed out, since 1982 the industry has suffered through a prolonged financial dry spell. Many companies have filed for bankruptcy or were liquidated or merged with others in an effort to survive hard times caused by lack of cargo exports during the past six years.

As an index of industry distress, 692 out of 2,792 hopper barges covered by MarAd's Title XI loan guarantees, or 25 percent, have defaulted on those guarantees. The remaining companies with their costs cut to the bone have been enjoying a brief economic recovery, only to be confronted with the new threatening challenge of record-breaking drought.

Mr. Chairman, if the drought persists, a way to provide a broad-based equitable formula for temporary cost relief to the inland waterway transportation industry, to avoid its collapse, may need to be considered.

While it is difficult to quantify the impact of the drought, the major trade association, the American Waterway Operators, has estimated that the financial loss to the barge and towing industry will be in excess of $60 million. That number obviously changes, sir, as the length of the drought goes on.

We have been working closely with other cognizant government agencies to ensure that the concerns of the industry are understood and are being addressed by those Federal agencies. That concludes my prepared remarks, Mr. Chairman.

Senator BREAUX. Thank you, Mr. Gaughan. Mr. Secretary?

STATEMENT OF ROBERT W. PAGE, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS); ACCOMPANIED BY MAJ. GEN. THOMAS A. SANDS, ACTING DIRECTOR OF CIVIL WORKS, U.S. ARMY CORPS OF ENGINEERS; AND DR. EDWARD DICKEY, DEPUTY FOR PROGRAM PLANNING, REVIEW AND EVALUATION

Mr. PAGE. Thank you, Mr. Chairman. I am Robert W. Page, Assistant Secretary of the Army for Civil Works.

With me today is Major General Thomas A. Sands, Acting Director of Civil Works, who was referred to earlier by Senator Sasser, and Dr. Ed Dickey, who is Deputy for Program Planning Review and Evaluation. They are sitting back here.

Senator BREAUX. Do they want to come up and be with us?

Mr. PAGE. I can reiterate from this prepared statement what you and Senator Danforth and Senator Sasser have previously stated, and of course what John amplified on just a moment ago, the severe drought conditions in the heartland of the Nation, what has happened as a result of that, what we are doing at this time, and what our plan of action is in the future.

There have been numerous short-term blockages which occur on the rivers as barges run aground. These occur daily, which are causing delays, usually lasting only a few hours. Several hundred of these have been reported by the Coast Guard.

The Corps has reported 27 closures on the Mississippi River and its major tributaries since early June, and these closures have lasted anywhere from one day to several days. Closures which were the longest period of time were Greenville, Mississippi, and the one on the Ohio River, both of which caused significant delays, and they have gotten high visibility.

For instance, the closure at Greenville had at one point in time 130 tows waiting. If each tow were configurated with 30 barges, which is common, it would require 234,000 semi-trailer trucks, to handle an equivalent amount of cargo. This backup would equate to 58,500 railroad cars, enough to stretch from New Orleans to Kansas City.

Incidentally, at this point, I would like to mention that yesterday in a meeting in New Orleans it was stated by the port director, that it has been evident over the last few weeks that a significant increase in the amount of rail traffic is occurring in the area as a result of this slowdown. I think you can confirm that, Admiral.

Delays caused by these blockages are costing millions of dollars in increased transportation costs due to increased fuel consumption per ton mile travel, increased transit time, dock access problems, the restrictions on loading and tow size.

As a result, spot barge rates have increased by approximately 150 percent, reflecting the market assessment of the impact of the drought on the underlying costs of transportation.

Nearly all shipments are covered by binding contracts, which were grandfathered, they had entered into them prior to the drought, which is causing the barge owners to bear the increased transportation costs in most cases.

Current information indicates that deep draft vessels in the port of New Orleans are experiencing two to four-day delasy waiting for barges to arrive with grain from upriver. Now, that report is as current as yesterday afternoon. So what I am giving you here is a lot of information based on meetings yesterday in New Orleans.

These delay costs are estimated to be about $8 million per month, which projected over the rest of the summer would total about $30 million.

In addition to the grain ships, dry bulk carriers are also being delayed. These additional costs are estimated to be equal to the amount incurred by grain shipped resulting in a total deep draft delay cost of $60 million.

Again, costs are being borne by the carriers of virtually all shipments that are based on contracts which are entered into prior to the drought. I do not know the exact percentage we have mentioned in here, but a great number of them that are in the water now are grandfathered on old contracts, so they have to go with that cost.

The Corps has a priority system for keeping navigation open on major segments of the Nation's inland waterways, and we have been working with the Coast Guard in this regard, and we have had a number of meetings with Admiral Leahy and others.

Now, to the future navigation conditions. Historically, the months of August and September constitute the low rainfall season, thus raising considerable concern for the long-term outlook.

The most probable forecast for the Mississippi River, is that the stage of the river at Cairo will not fall significantly below current levels. This stage is expected to prevail until late September or early October, when the autumn rise begins, provided normal rainfall returns.

Under this forecast, only reduced levels of navigation can be maintained throughout the remainder of the summer, with continuous dredging. Additional blockages will likely occur, creating further delays on the Mississippi River.

And I think that in a minute we have some charts back there that we would like to bring up and go over them with you. As mentioned earlier, the Department of the Army has taken a very active role in mobilizing both its manpower and its resources to manage our national water resources under this jurisdiction.

It was stated earlier, I think, by Senator Danforth that there is not much problem with the flow of the Missouri River. That certainly is based on a wise decision early on that we build some reservoirs in that area. And they are presently supplying about two-thirds of the Mississippi River flow at St Louis and about one-third of the flow at Memphis.

You can correct me, General Sands, if I am wrong, but that flow, along with what we expect to be a minimum flow out of the Ohio and upper Mississippi river tributaries will provide almost all of the required flow to keep the Mississippi open.

We made the statement, publicly and to you, Senator, that this river will remain open. We expect that it will. The problems which arise have more to do with drift and with crossovers than with low water at this time.

That is, at approximately 50 points along the river, we have areas that have a tendency to fill. And that is where the dredges have been placed, and they have been working in those areas to keep the river open.

And as I speak now, unless the situation has changed in the last two hours, the river is open, traffic is flowing, and it has been, I think, for the last three days.

Senator DANFORTH. You are talking about the Missouri?

Mr. PAGE. No, the Mississippi. The Missouri, of course, as you stated earlier, has a steady waterflow.

We attribute that mainly to the reservoirs that are there, and that heartens us a great deal that we are getting flow from the Missouri into the Mississippi to keep that river open.

Although I am part of it I do commend the Corps for the work that has been done, the position of the dredging, the way it has been handled, and the fact that channels have been kept open.

Also, the cooperation that we have had working with the Coast Guard and regulating the size of the tows and the drafts. I will speak to that in a little more detail, but I am sure that the Admiral is going to cover this aspect of the conditions that remain as far as the traffic is concerned.

There are three issues that I think are paramount today.

One is the continuing operation of the Mississippi River. Will it continue to be open? And if so, to what extent will it be open? What effect does that have economically on the people that are affected by the river?

Secondly is the, as Senator Sasser stated and the letter which each of you signed along with a total of 13 Senators regarding the diversion of water from Lake Michigan, we will address that issue.

And the third is, which is important in the lower part of the Mississippi, is the salt water wedge.

Senator BREAUX. Let me say at this time, this may be a good time, since you have posed the three major issues, that we are going to have to take a break.

We have a recorded vote on the Senate floor. We will get right back, then we can take up those three things you just mentioned.

[Recess.]

Senator BREAUX. The Committee will please come back to order. When we finished, of course, Secretary Page was in the middle of his presentation, he had outlined three principal areas of concern. And Secretary, if you would please continue.

Mr. PAGE. Yes, sir Senator, if I may I will try to interpret the charts for you, I think Senator Danforth addressed this issue earlier but I will elaborate a little further. And if I may, I will can call upon my experts to give me a hand.

Senator BREAUX. Who are the experts?

Mr. PAGE. They are the ones who would not come up and sit up at the table with me.

What we ultimately have New Orleans is the total flow of the Mississippi of 119,000 cubic feet per second (CFS). What we normally have is 400,000. So you see the magnitude of the restriction in flow because of the lowering of the water and of course the drought condition.

Starting at various points, I will just give you some references. At Kansas City, a normal is 57,300. Currentyl, flow is 43,000 CFS at that point. I mentioned earlier that for Cairo, at 140,000 CFS is normal, and it is flowing at 34,000 CFS now. For St. Louis, 213,000 CFS is normal, and you are flowing at 64,000 CFS.

What we are saying is the flow today of 119,000 CFS, is enough flow to keep this river open. We feel that even if we do not have any further precipitation, we will have enough flow coming in from the upper Mississippi river basin, the Missouri River basin, and from the Ohio River basin, to give us sufficient flow at New Orleans to keep this river open until late this fall..

That is, enough water flowing there to maintain the river traffic down to New Orleans. It will be restricted as it is now at about 50 percent, or a little less.

Senator BREAUX. When you say keep open, you are talking about keeping it open at only one-half of what it would normally be operating at?

Mr. PAGE. We argue about what the percentage is, but it basically is about 50 percent. To do that, to do that we have to put dredges at critical points to keep the channels open, which I mentioned to you earlier.

Senator DANFORTH. Can I interrupt? I am sorry. When you say one-half, is that one-half the number of barges or one-half the tonnage that would normally move down the river?

Mr. PAGE. Well, they both relate. It is one-half of the tonnage of the barges.

Senator DANFORTH. In other words, the barges are half loaded? Is that the point, that the barges are half loaded?

Mr. DICKEY. The size of the tows.

Mr. PAGE. The Coast Guard has now restricted the size of the tows. You normally are dealing with over 30 barges per tow. Right now those tows have been brought down to 18 barges——

Admiral LEAHY. Sixteen.

Mr. PAGE. Sixteen barges in the tows. So that is a significant decrease in the number of barges per tow.

And also the U.S. Coast Guard has taken and restricted the draft. In other words, the barges are not fully loaded to the point that the draft is at about eight and a half feet rather than the normal nine. That is to allow them to get through.

With the lessening of the amount loaded in the barges and the lessening of the barges, we anticipate that would be about 50 percent of what we normally would have.

Senator DANFORTH. Thank you.

Mr. PAGE. The restrictions of the crossovers, which I said we have identified, and the crossovers now are being cleared by our barges to maintain the river. That is the main dredging operation that is taking place. I think you will see most of them here along these red marks.

Senator BREAUX. How many dredges do you have operating now?

Mr. PAGE. We took one off today and we have 11 now. We took the cutterhead off this morning.

This chart shows what we were just indicating here, but in chart form, that the river flow at New Orleans is currently 119,000 or 120,000. The lowest flow that has been recorded occurrec in 1939 when it was down to 75,000 CFS.

So we are hitting at about an all-time low on flow. Is that correct?

General SANDS. Yes, sir.

Mr. PAGE. We talked about the salinity level. This is a complicated and a busy chart. But first we start off and we show here the decrease in flow, cubic feet per second. We just talked about that. And this is the wedge procedure. That is the salt water wedge that is moving up to New Orleans.

In fact, the toe of that wedge, which is the front part, is at 104.5 miles and has been steady for three days. And that shows it right here.

We are now building a sill, which is at about 63.7 river miles. It does not show on here, but the sill is a salt water sill under contract now, and it is being built to an elevation of –45 feet, that is 45 feet below N.G.V.D. level 45, that is 45 feet below the surface.

That sill wedge should be completed within, say, 10 days. And what this is going to do is to take that salt water wedge that comes in, it comes in low, displace it up until it hits the fresh water with the normal flow of the river.

We have enough flow to do this in the river that will disperse that salt water to the point that in New Orleans it would be less than 250 parts per million. And 250 parts per million is almost negligible as far as taste is concerned.

We expect that to stabilize and stay that way. It should even drop, I believe we have a level here that at 45 feet the salt water salinity level parts per million will be at 100, just short of 100, and of course that will not affect your potable water and will not get to the point of even the lowest standards set by the Louisiana Department of Health, which is 250.

We expect it to remain that way. We expect that the flow, which is important to maintain, will also be an offset to the wedge and also the sill. Is that clear enough for you? So that is two issues.

The third issue, of course, was eloquently mentioned by Senator Sasser, and also Senator Danforth and yourself.

Senator BREAUX. I see we are not only out of water in the Mississippi, we are out of water at your table. You see how easy it is to get water from Congress?

Mr. PAGE. The third issue is the diversion of the water from Lake Michigan.

Looking at this chart, and I am trying to explain it as best I can, that we do not expect that we will have a flow situation which will be critical to the point that we will not be able to move traffic.

The second point of that is that the diversion of the water from Lake Michigan would not provide us with enough depth to even help the situation as it occurs now.

Now, these are engineering studies. I know that you talked about the, conflict between Senatorial and Congressional delegations from the Great Lakes area and the ones from the South. We did not look at that issue, Senators.

Senator DANFORTH. What issue?

Mr. PAGE. This to us was a technical issue, it was an engineering evaluation I am talking about now.

Senator DANFORTH. You did look at the diversion?

Mr. PAGE. We have looked at it. We addressed ourselves, first, to Governor Thompson of Illinois, and he asked in a letter of June 23rd that we look into this, that we release this water, that we put into effect authority or find the authority that we can do it.

To answer that question, we have that authority. We can do that. If push comes to shove——

Senator DANFORTH. I am sorry. I hate to interrupt, but just to understand, you have the authority to release the water?

Mr. PAGE. Yes, we do.

Senator DANFORTH. And the President could do that, right? You would not have to have permission from the governors?

Mr. PAGE. Well, we have stated that we would get permission. We have the authority to release the water, but a condition would be that we would consult with the eight governors.

Senator DANFORTH. Well, let us say that the President decided that it was necessary to release water. I have not researched the law, but there apparently is a question as to whether the President could do that, or whether as a matter of law it would require the permission from the Great Lakes governors.

It is my understanding that while the President would consult with the Great Lakes governors, your position is that as a matter of law the President has the power to do it without the approval of the governors.

Mr. PAGE. It is my understanding that that is correct, Senator.

Senator DANFORTH. But that such relief is not anticipated because of the fact that it would not do very much good.

Mr. PAGE. That is true. I am trying to be as specific as possible. I personally and I know that the rest of us would feel that we would have to consult with those eight governors and get some kind of a concurrence from them. However, we do not feel at this time that, from an engineering and feasibility standpoint, that increased diversion would help the

flow in the river, or offset the salt water wedge. And therefore that is the decision that we have arrived at.

But one comforting aspect of that is that you have asked a number of times through letters and personally for us to clear the way that this can be done if it became imperative.

We have done that. We have that authority, Senator, to answer your question. Senator, those are the three points.

Senator BREAUX. Thank you, Bob. Admiral?

STATEMENT OF REAR ADM. WILLIAM P. LEAHY, JR., COMMANDER, SECOND COAST GUARD DISTRICT, U.S. COAST GUARD

Admiral LEAHY. Good afternoon. I am Admiral Bill Leahy, Commander of the Second Coast Guard District in St. Louis, Missouri, which encompasses the western river systems, and unfortunately I am here alone today.

Mr. Chairman, I am pleased to have the opportunity to meet this afternoon with you and Senator Danforth to discuss navigation on the Mississippi River. I have a brief opening statement that addresses specific areas in which you have expressed an interest, after which I will be pleased to respond to any questions which you may have.

Due to the severe drought, the lower Mississippi, part of the upper Mississippi and lower Ohio rivers are experiencing very low water which is hampering navigation. The situation is very dynamic, requiring day-to-day flexibility.

Presently there are two major restrictions in effect, a safety zone on the lower Mississippi River from mile 507 to mile 882, that is from Greenville, Mississippi to New Madrid.

Barges transiting that zone are restricted to drafts of eight foot six or less. Tow sizes cannot exceed 1,000 feet in length and 105 feet in width or 800 feet in length and 165 feet in width.

This zone was established by the Captain of the Port in Memphis, Tennessee as a result of the tenfold increase in groundings due to the low water levels. This restriction will remain in effect for as long as needed.

Recognizing that there were nine-foot draft barges already in the river system, the Captain of the Port established a convoy system in order to expedite the passage of deep draft barges throughout the restricted area.

The convoys consist of three to five tows, each of which cannot exceed 12 barges. Each convoy identifies a lead tow to act as coordinator. The lead tow periodically reports progress to the lower Mississippi River Advisory Committee at the Captain of the Port's office in Memphis, Tennessee.

The results have been positive. While moving under very controlled conditions. Progress has been steady but slow, with transit times about twice the normal length, but improving. The Captain of the Port is ensuring that all towing companies have equal access to the towing convoy system.

A safety zone on the Ohio River from mile 962 to mile 975, which is basically below lock and dam 53 in the Cairo-Paducah area, has been established by the Captain of the Port, Paducah, Kentucky. The zone restricts navigation to barges with drafts of less than eight foot six inches.

This area remains a major problem and a dredge has recently arrived to maintain the portion of its waterway. Traffic will continue to move through the area. While some delays can be expected, no significant queue or backlog has been experienced since this channel has been reopened.

In general, transits on the entire Mississippi River and Ohio River waterways remain slow, taking almost twice the normal amount of time.

Normal aids to navigation servicing requirements call for approximately 3,500 buoys and five river buoy tenders on the lower Mississippi and lower portion of the Ohio River. The reduction in river levels has caused the Coast Guard to place approximately 2,000 additional buoys and to divert three more river tenders into this area.

Overall on the western rivers the number of aids to navigation has risen from approximately 9,400 on 1 June to 11,100 on the first of July.

Additional actions taken have been to delay until next fiscal year the scheduled drydocking of two cutters and postpone scheduled 30-day dockside maintenance periods for two other cutters involved in the drought operations so that they can continue to work on the waterway.

An HH-52A helicopter and crew have been detailed to the lower Mississippi River area to assist in daily air observations for rapid fact-gathering, transport of U.S. Coast Guard, Corps of Engineers and industry representatives and navigational hardware delivery. This aircraft will remain in the area of operations as long as the district commander requires its services.

Twenty-four command posts have been established at the Captain of the Port offices in Memphis, Tennessee and Paducah, Kentucky. These posts are augmented using reserve personnel called to extended active duty, and active duty TAD personnel from the district office in St. Louis.

These posts maintain constant communications with Coast Guard field personnel and rapidly disseminate channel conditions to the users.

The lower Mississippi Advisory River Committee was established by the Captain of the Port in Memphis. This committee is comprised of Coast Guard, Corps of Engineers, and industry representatives.

It has performed the function of maintaining the liaison between the major waterway users and those commands tasked with the maintenance of the waterways. Thank you.

Senator BREAUX. Thank you very much, Admiral, and all of you for your participation.

Mr. Gaughan, you have said in your written testimony that if the drought persists, we may need to find a way to provide a broad-based equitable formula for temporary cost relief to the inland waterway transportation industry to avoid its collapse.

And we have heard the testimony about the millions of dollars that are projected to be lost, that tows are now taking twice as long, that you have got severe restrictions on the tows as far as how much they can be loaded to.

Some have suggested consideration of a waiver of the inland waterway tax that barge operators currently pay for a temporary period of time. Is that something that has been discussed in the task force? Or has that been brought to anybody's attention in OMB or anywhere else?

Mr. GAUGHAN. It has certainly been brought to the attention of the task force. The AWO addressed a communique to Secretary Lyng, and I believe Secretary Page, and also to ourselves. And it is, I think Mr. Page can probably speak to it better than I.

We are certainly looking at it. There is, and I think there are some policy issues that have to be looked at. It is a legally mandated tax, if you will. That money goes to contribute toward improvements to the waterway and so it could be a double-edged sword.

We have not, I am not aware of any final decision on that, sir, but Secretary Page can probably add to it.

Senator BREAUX. Any additional information?

Mr. PAGE. Yes, sir. This is just recent so you might not be up on it. There is a bill, H.R. 5014, that was introduced by Congressman Alexander, that would temporarily relieve the barge and towing operators from paying inland waterway fuel tax, as it was authorized in P.L. 95–502 and increased in the Water Resources Act of 1986, P.L. 99–662.

Senator BREAUX. And the Administration, from your testimony, strongly opposes it, I note.

Mr. PAGE. I do not know how strongly, but we would say that——

Senator BREAUX. That was your statement.

Mr. PAGE. Well, once you give it is hard to taketh away, and we are afraid that if this bill is enacted it will get to a point that we may never go back to our original inland waterway tax.

Senator BREAUX. The inconsistency that I note here is that the Administration has indicated through the Secretary of Agriculture strong support for the bill that we reported out of the Agriculture Committee this afternoon, which would approve and authorize up to $100,000 for disaster drought assistance to farmers in the form of a direct payment to farmers to help farmers who have suffered from the drought.

It would seem to me that this is an industry that has suffered the same type of injury, economic injury, for the same reason, because of the drought. And I guess I find it difficult to see how the Administration can support relief for one segment that has suffered but not for another segment that has suffered equally from the same disaster.

Mr. PAGE. Senator, I can only respond to that in the statement I made before that it may set a precedent that we would not be able to reverse.

Senator BREAUX. We will have to have this be reveiwed, because as you know, on the one hand we are doing something to help farmers, on the other hand apparently at this point the Administration is saying no to a very important segment of our industry which is suffering the same type of loss from the same type of disaster.

Now, let us pursue the question of the diversion that you mentioned. You have the authority? To authorize a diversion? In fact, the Army did a diversion, I guess, back in the 1950s, 1956, 1957?

Mr. PAGE. 1956, 1957.

Senator BREAUX. You have pointed out to this Committee that the flow of Mississippi, is at historical low levels. Since we have been recording the flow it has never been this low before, though we are now looking at the season where it generally gets worse. August and September and generally is the time when it is worse than it is today, and today it is at the lowest level ever.

I guess the concern that we have is that you have looked at the feasibility from an engineering standpoint of diverting the water, and you find that it is not an engineeringly technically feasible thing to do. Can you tell us why it is not?

Mr. PAGE. Well, I hope so, Senator. First of all, the amount of water which would be released from the Great Lakes, from the diversion, would not substantially help the water flow in the Mississippi nor its depth. That is first.

Secondly, we maintain that we will have enough flow, as I stated, from the upper Mississippi river basin, the Missouri River basin and the Ohio River basin that will give us a flow that will maintain navigable depths with continual maintenance dredging.

We do also have enough——

Senator BREAUX. On that point, I guess what you are saying then is that without any rain of any substantial amount, and without any diversion of water from any other tributary or other source of water, that the flow would not get any worse than it is today?

Mr. PAGE. We think that the present forecast is that the bottom that it could get is around 100,000 CFS. It is 119,000 CFS now. That would still maintain the same amount of movement in the Mississippi that we presently have.

We do not feel that the diversion would increase this, would help this present situation or the one that we have projected. But that does not say that it leaves open to what would happen that would be catastrophic, we could not predict and do not at this time.

Senator BREAUX. Can you just explain for the record why you would not be able to divert additional water to make a substantial impact on the river from the Great Lakes?

Mr. PAGE. Well, I can give it to you in general terms. I think that we have been asked to divert, a maximum of 10,000 cubic feet per second.

That is the most that we feel we could do from an engineering standpoint, from a sociological, economic, and environmental standpoint.

General SANDS. That is just physical standpoint, sir. The capacityto carry increased diversions is limited to 10,000 cubic feet per second in the Illinois waterway.

Mr. PAGE. So that is the maximum we can do. We projected that would not have an impact at this time or in the foreseeable future.

Senator BREAUX. What would be involved engineeringly to increase the capacity ability?

Mr. PAGE. We would have to build larger water facilities up there to move that water.

General SANDS. Sir, that would require enlargement of the conveyance channels, that would have to be utilized to divert any kind of significant quantities of water.

Senator BREAUX. General Sands, please come up to the table, because I know this lady down here is having real fits. Would you repeat that again?

General SANDS. Senator, as the Secretary mentioned, the problem you have is the physical size of the conveyance channel that could possibly be utilized. And that would limit the flows.

If you are talking about trying to get anything in excess of the current diversion capacity, you would be talking about a rather extensive engineering operation that would necessitate the enlargement of all of the conveyance channels and potentially impacting the size of the conveyance of the Illinois River.

Senator BREAUX. Senator Danforth?

Senator DANFORTH. Thank you, Mr. Chairman. Ten thousand cubic feet per second would add what in depth to the the Mississippi River?

Mr. PAGE. We have varying points, but I would say that an average overall figure is about six inches.

Senator DANFORTH. About six inches? Admiral, would that be significant in your view? Six inches of additional depth?

Admiral LEAHY. I think any increase would be significant. I think the real challenge they have out there now is the width of the channels, in addition to the depth also.

Senator DANFORTH. Let us say that this were done, delivering 10,000 cubic feet per second to raise the river six inches, what would be the effect on the size of the tows? Would you be able to increase the volume of traffic on the river?

Admiral LEAHY. I am not sure that you would get a constant six inches throughout the river. Would you?

Mr. PAGE. No.

General SANDS. Sir, a six-inch rise in the stage of the river at this particular flow does not necessarily result in a corresponding increase in river depth available for navigation throughout the system.

Senator DANFORTH. All right. Let me ask a more layman-like question then. What effect would 10,000 CFS have on the volume of traffic that the river could carry, Admiral?

Mr. PAGE. The volume of traffic?

Admiral LEAHY. If we had any constant—we do not have the constant, that is the problem. It may go up six inches at St. Louis, it might only go up three inches at Cape Girardeau. It may drop in Memphis. I do not know. If I knew what it would do throughout the system, I could probably answer it sir.

Mr. PAGE. Our problem, Senator, if it were significant, you know, above a certain level, I do not know what that would be, but one of the major problems we have is the bottom of that river moves. And that is where we have more of a problem in keeping it by and dredging it.

Senator DANFORTH. I am all for dredging. The question is, as I understand the problem there is less water in the Mississippi by four times, fourfold, than there usually is, and that that has caused a problem with transportation.

And I do not know what difference 10,000 cubic feet means with respect to increasing the capacity of the river to carry tonnage. But I take it nobody else knows.

Admiral LEAHY. I think if somebody could tell me that it would increase the depth six inches all up and down that river we would probably be able to increase the draft of the barges by six inches from what we are doing now.

Senator DANFORTH. Let us say that you did that, then you would be increasing the draft from eight and a half feet back to nine feet, back to the average. Right?

Admiral LEAHY. Yes, sir.

Senator DANFORTH. But you would still have 16 barges in the tow instead of 30?

Admiral LEAHY. Yes, sir. We probably would.

Senator DANFORTH. I am not good at math, but that would be what percentage increase? Do you know? It is one-seventeenth, it is about a five percent increase.

Admiral LEAHY. I think the last foot on a barge is about almost nine or 10 percent of the total volume of the barge. I am not sure about that.

Senator DANFORTH. About a 10 percent increase?

Admiral LEAHY. I am guessing, yes sir.

Senator DANFORTH. Now, with respect to the reservoirs in the Missouri River. They already are increasing their flow, Mr. Secretary?

Mr. PAGE. No, not on the Missouri. They are at steady flow now. They are not increasing their flow at this time, are they?

General SANDS. No, sir. We do not have continuing increase in the flows. The flows are being regulated at the moment, based on the rule curves that relate to the discharge of flows from those reservoirs in a controlled manner.

Senator DANFORTH. Well, has a study been made of the possibility of increasing the flow from the reservoirs?

General SANDS. Yes, sir. One of the problems you have in maintaining navigation on the system is it is the steady state of the flow that you have, as opposed to, within normal, as opposed to the quantity of flow.

As the Secretary has mentioned, our projection showed that the base flow conditions that we would expect during this particular low water system shows that we will have that particular level of flow where we can maintain navigation with about the same degree of difficulty that we are having right now.

Two and a half or three weeks ago, when the flow was significantly higher than it is right now, we were experiencing significant problems in maintaining navigation, as the Admiral has mentioned, within the Memphis area. So it is the steady state flow if you have a significant delta above your base flow condition that is important.

Senator DANFORTH. Again, just speaking as a layman, it seems to me that if the problem is tonnage that is carried on the river, and that is related to the depth of the river, if we can increase the depth of the Mississippi River that is a worthy goal.

So if we could increase it by six inches by drawing on the Great Lakes, and we could increase it further by increasing the flow from the reservoirs in the Missouri down the Missouri River and in turn into the Mississippi at St. Louis, the combination might have some beneficial effect.

General SANDS. It potentially would, Senator, but there is not a direct relationship between a potential rise in stages in the river and the depth of that river system as it relates to navigation.

In other words, when you say that, for example at Vicksburg, Mississippi, if you are going to have a rise of a foot, that does not necessarily mean that you will be able to increase the draft of the navigation on that system by an additional foot.

Senator DANFORTH. I do not know how to pursue this course. I thought that the object was to increase water in the river. Am I wrong?

General SANDS. No, sir. It is. It is the quantity of flow in the river that is extremely important and, within certain limits, that will have an effect. But my point is simply, when we are looking at our ability to control flows in the river band, oftentimes that will not help you very much.

Now, if we could put an additional 100,000 cubic feet per second into that river system, then that certainly is going tohelp.

Senator DANFORTH. How much potentially could come from the reservoirs per second additional?

General SANDS. Senator, we will write that for you for the record, what could be done there. We will certainly give that to you.

I guess the point here is, from an engineering, hydraulic perspective, it is a very complicated situation.

[The following information was subsequently received for the record:]

A maximum of an additional 10,000 CFS could be released from Gavins Point Dam, the most downstream project we have on the Missouri River, without causing damages along the Missouri River. This would produce a total maximum release of 45,000 cfs from Gavins Point and would be achieved by passing 35,000 cfs through the power generation facilities and 10,000 through the spillway.

Senator DANFORTH. I am the farthest thing in the world from an engineer, but am I right that you are saying that you have the legal power to release water from the Great Lakes and also from the reservoirs on the Missouri, and that you would not need an environmental statement or an Act of Congress or, legally, permission from the governors?

Mr. PAGE. I am not sure about the Missouri River. We will let you know about that. We have not looked at that.

[The following information was subsequently received for the record:]

No further action of the Congress or permission from the Governors of affected states would be necessary to make additional releases for navigation from the reservoirs on the main stem of the Missouri River. Implementing such additional releases would be subject to compliance with the requirements of the Endangered Species Act, the National Environmental Poliocy Act, and any other pertinent environmental laws. Whether preparation of an environmental impact statement would be necessary would await the results of an environmental assessment of the proposed action.

Senator DANFORTH. Could I ask you please to monitor this very carefully. It is clearly a matter of moment, not only in the short term, but I think, as the Administrator pointed out, the long term health of the system as well.

Mr. PAGE. Senator, I understand how someone could be confused as that 10,000 cubic feet per second is 10,000 cubic feet per second. But looking at the relationship between the flows and the navigability, the shoaling effect -- and I tried to bring that out a moment ago, which is the most paramount part, is that that amount does not give us enough increase in our opinion, in our study, that would prevent the shoaling at those 50 points.

And that is where our critical point is. If we had more flow, that would help. But 10,000 is not going to help us there. We are going to have to continue with that amount of flow in the same mode that we are in right now.

Senator DANFORTH. Mr. Secretary, I will ask one more question if the Chairman will permit me. If it appears that the release of water from the Great Lakes is necessary for the flow of traffic on the Mississippi River, would the Administration entertain the possibility of releasing that water?

Mr. PAGE. Yes, sir. I think I mentioned a moment ago that we do not foresee this, but let us say some act of God greater than it is at this point and that was the mandatory and necessary thing to do. We would be remiss in not doing that.

Senator DANFORTH. Thank you.

Senator BREAUX. Thank you. That was a good discussion on the effect of additional water at 10,000 cubic feet on the river from a navigation standpoint.

What about from the question of a salt water intrusion standpoint? We have got people in lower Louisiana that are now having water trucked in and barged in, and people have a fear of not being able to drink the water. Plants that pull water from the river for refinery purposes are finding that the salt would give them severe operational problems if they would use it in their refining operations.

Would that extra amount of water have a positive effect on the salt condition of the river?

Mr. PAGE. No, sir, it would not. I think I mentioned earlier that with the flow down to a minimum of 90,000, which we are now at 119 or thereabouts, that we would still get enough flow with the sill that we have built that is forcing that salt water up to disperse, to move it.

And I believe that on this chart, if I can, that here is the parts per million we were talking about a moment ago, the chloride. The minimum that your health departments require in the state of Louisiana I believe is 250. That means that 250 people have to be alerted to have problems with sodium intake.

But it does not mean that it will affect the flavor of your favorite drink with water.

Senator BREAUX. Well, you do not drink beer with water.

Mr. PAGE. Well, I was not talking about beer.

But that 45-foot channel at a 45 depth here, you will see that now, which we are bringing that sill to this point, that that chloride level drops way down here below 100. So we do not anticipate under present circumstances, with the flow that we have, given without any further rain, that you are going to have a salt water or chloride problem.

Senator BREAUX. What is your current salt content in the New Orleans area now, approximately?

Mr. PAGE. It is what, 170?

General SANDS. It is less than 100 at the moment, sir, at the fresh water intakes. And it will be expected to go up a little bit.

Senator BREAUX. It points out, some of the newspaper articles point out, that in 1936 in the New Orleans area the reading was 600 parts per million.

Mr. PAGE. We have that. That is true, and it has gotten up to well over that. It has gotten up to well over 1,000. Is that right?

General SANDS. Yes, sir. Not at New Orleans.

Mr. PAGE. But at the intakes.

General SANDS. Once the salt water wedge gets in place, Senator, it takes a flow of about 200,000 cubic feet per second to cause it to move back towards the Gulf.

Senator BREAUX. I guess the final point—and I think you answered this to Senator Danforth, but that if that became apparent, that extra water was needed for the Mississippi River to be brought in, say from Lake Michigan through the existing channels, even though it is limited in the amount that you could bring, the Corps feels that you have the authority to do that?

Mr. PAGE. Yes, sir. We feel we have the authority to do that.

Senator BREAUX. The reason I asked it a second time is that we have heard a lot of talk and reading in the press that the water compacts between various governors, Canadian interests, would prohibit the Corps from taking that action.

But I hear you saying that you feel you have the authority, have used it in the past, and that the authority is still valid.

Mr. PAGE. We have the authority. Again, we bring back what also you and Senator Danforth mentioned earlier, that it would—before we did that, we would consult with the eight governors, and also this would have to be coordinated with the State Department as far as the Canadian government is concerned.

But legally we could open the gates.

Senator BREAUX. Gentlemen, we thank you very much. There may be some additional questions that we would want to have for you to respond to. But we thank the panel very much.

We would like to welcome at this time Mr. Joseph Farrell, who is President of American Waterways Operators, and Mr. John Zick, who is Vice President of North American Grain Division of Continental Grain.

If you will take your seats at the witness table, we will be pleased to have your testimony. Mr. Farrell, we have you listed first. If you would like to go ahead, we would be pleased to receive your testimony.

STATEMENT OF JOSEPH FARRELL, PRESIDENT, AMERICAN WATERWAYS OPERATORS

Mr. FARRELL. Thank you, Mr. Chairman. I had planned to be brief. Mercifully, I can be even more brief because your opening remarks, Mr. Chairman, covered a good deal of what I plan to say.

Let me, if I may, just share a couple of observations with you which I think might be helpful to you in your deliberations.

First of all, we have heard a lot or at least seen a lot in the media to the effect that there is a farm crisis as a result of this drought. Today we are talking about a crisis, or at least a set of serious problems, for the barge and towing industry.

We hear about problems this might present down the road to the Great Lakes. I submit that this is an American problem. This is not a regional problem. It is not a river problem or a farm problem, but it is an American problem.

And we need to keep that in mind and remind ourselves, I think, of the old American barn-raising ethic, that when you get in trouble your neighbors come and help you out, rather than regional confrontations between the Great Lakes and the Mississippi River and things like that.

I doubt if it becomes necessary to release waters from the Great Lakes—that will be so apparent to everybody that the concerns that have been expressed about it might not be as well founded as some think.

The second observation I have for you is, our association has spent the last several years trying to diminish the effect of the pork barrel label, that onerous label that is applied to not just the waterways industry, of course, but highways and so forth.

If there was ever a time that it should be vividly clear to the American people the great treasure that these inland rivers constitute for this nation of ours, now is the time I think that that is brought to the forefront of our consciousness.

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They are not pork barrel. They are, rather, the arteries down which flow some of America's most important commerce. And it is well if we are reminded of that. There is a silver lining, I guess, in this cloud that is hanging over us.

The American Waterways Operators have tried to contribute to the management of this crisis. Let me just mention a couple of things we have done. First of all, we suggested back in toward the middle of June that plans should be made to divert waters from the Great Lakes should that become necessary.

If it is necessary, it will be apparent and it is too late to make sensible, sound, carefully thought through plans at that point. Now is the time to do it.

We are a small outfit. We are very pleased that the Senate and Governor Thompson and others have given visibility to that important initiative.

We have also sought to have representation for our industry on the President's drought task force. We have been successful there.

Mr. Chairman, we have been totally unsuccessful in doing that in the Congress. We have tried to get a voice, if you will, in the Congressional group that is considering the effects of the drought, and I think it is no wonder that the legislation that is being proposed is all farm-oriented, because the task force has a group of members of the House and Senate who really are agriculturally oriented, which is entirely appropriate, but I do not think it should be exclusively agriculturally oriented.

We are also finishing up an economic survey of the effect of this drought on our industry. We expect some time around the middle of next week to have defined to the best of our ability in financial terms what the effect is.

I do not know today what effect the drought is having financially on the barge and towing industry. I know it is having an effect. How large it is, I do not know.

If it is significant enough, we would like to come to you, we would like to approach you and seek appropriate Federal assistance. But it could well be that we do not need it, either. So that is an open-ended question.

Finally, we were a catalyst, I guess is the right word, in putting togethe an ad hoc small group of leaders of the Coast Guard, the Corps of Engineers, and industry leaders in Memphis on July 6th to act as a policymaking and monitoring and communicating group to manage to the best of our ability sharing the expertise of the three entities on the ongoing effect of the drought.

Admiral Leahy is the Coast Guard representative. General Sands and John Elmore for the Corps, and then a fellow named Norm Whitlock of the American Commercial Barge Lines is the chairman of the industry group.

And we think that will prove to be a very effective, streamlined way to deal with this problem.

The outstanding matters that I would like to leave you with as far as our perspective are: First of all, we need to finish the economic survey, and we will get back to you on that one way or another. Second, we would hope that there is some way that we can expand the visibility in the causes of the drought's effect on our industry. We thank you for this hearing today because it is a big boost to the effort of our industry as Congress deliberates the effect of the drought. And finally, and I think very important, that we all elevate our sights a bit and look down the road. When it starts to rain in late September or early October, the serious effects of this drought will not have ended. And now is the time, just as in the case of diverting waters out of the Great Lakes, we need to get the plans in place to deal with normal rainfall and snow pack, below normal, and even above normal, how best to manage these kinds of conditions on into the summer of 1989.

Now is the time to do that planning, not later.

Thank you, Mr. Chairman.

[The statement ofollows:]

STATEMENT OF JOSEPH FARRELL, PRESIDENT, THE AMERICAN WATERWAYS OPERATORS [AWO]

Mr. Chairman and Members of the Subcommittee:

I am Joe Farrell, president of the American Waterways Operators [AWO], the National Trade Association representing both the inland and coastal barge and towing industry. I will frame my comments today by sketching for the subcommittee the barge and towing industry.

AWO member companies operate towboats, tugboats and barges on the inland waterway system and the east, west and gulf coasts. Over one-half of the onboard jobs in the U.S. Merchant Marine have been created by the towing industry. In a typical year, there are more than 125,000 moves to and from over 200 U.S. cities; 87 percent of all U.S. cities are served by tug-barge movements. Almost 60 percent of grain exported by the United States is moved to seaports in barges, and one of the every five tons of coal produced in the nation is carried by barge. Barge transportation accounts for 40 percent of U.S. petroleum movements. Our vessels transport about fifteen percent of the Nation's intercity freight for just two percent of the total freight bill.

Trains, planes and trucks and more familiar to the general public than barges and towboats, but they are no more important. Quietly, safely and efficiently—almost invisibly—the barge and towing industry carries America's most critical cargoes. To illustrate the magnitude of the volume transported by our industry, it would take at least 15 railroad cars or more than 60 trucks to fill a single barge. One barge transports the harvest of 1,500 acres of farmland. The typical southbound river tow consisting of 30 barges has a cargo capacity equivalent to 450 rail cars, or more than 1,800 trucks.

Today, I speak for our carriers who operate on the inland rivers of the United States. Our Nation's inland waterway transportation system has been hard hit by what is a historic drought. We feel that this is a timely hearing, Mr. Chairman, for this drought has increasingly ominous portent deserving of the attention of the Federal Government. Although water levels of our inland rivers have dropped dramatically, towing vessels and their barges are slowing and cautiously making their way through the narrowed, changing channels to deliver vital commodities to their customers. The credit for this belongs largely to the U.S. Army Corps of Engineers and the U.S. Coast Guard which have responded in commendable fashion to problems as they occur on the rivers.

AWO has moved, and continues to move, swiftly to help manage the growing crisis.

In the first stages of the drought, as the White House and Congress began to focus attention on the deepening crisis, AWO sought appointment of a spokesperson for the water transportation industry on the White House Interagency Drought Policy Committee. As a result, the Department of Transportation has been included in the deliberations of the group. We have had less success in efforts relating to the agenda of the Congressional Drought Task Force; your hearing, Mr. Chairman, is the first to focus attention on the drought's effects on the river transportation system and the shippers and their customers who must depend upon it.

In assessing the severity of the drought and the likelihood that conditions will worsen, AWO determined that the existing communications and response apparatus of our industry, the Corps of Engineers, and the Coast Guard, which were deployed for normal operating conditions, were inadequate in this time of anything but normal conditions. We pressed for the creation of an integrated and streamlined organization of all three entities to assure that:

Our rivers remain open to navigation; water supply and water quality remain adequate; and unnecessary damage to the environment is avoided;

A timely and coordinated communications system is developed and functional; and

Necessary long-range contingency planning is initiated to accommodate the impact of the drought during the winter, spring and summer of 1989.

With this objective in mind, AWO organized a meeting of inland barge and towing operators last week, which resulted in the formation of a seven-member industry task force—the river industry executive task force—to work in concert with the corps and the Coast Guard. Then the association, on July 8, hosted a meeting in Memphis with top corps and Coast Guard officials to pursue the formalization of an industry-corps-Coast Guard working group.

I am pleased to inform the Congress that the meeting was a success. The Coast Guard has designated Rear Admiral William Leahy as its representative; he is commander of the Second Coast Guard District. John Elmore, chief of the operations

and readiness branch, has been named as the corps' representative. He will be backed and supported by Major General Thomas Sands, who will resume command of the Lower Mississippi Valley Division later this month. Norb Whitlock senior vice president of the American Commercial Barge Line Co., chairman of the industry task force, will be the towing industry's chief representative. This group will act as a crisis management team to coordinate and respond to the unprecedented drought conditions.

AWO also has taken steps to organize and coordinate a full range of responses to the drought. There is a critical need for data, and AWO is conducting an ongoing survey of the barge and towing industry to determine the effect on the transport of agricultural commodities, coal and other bulk products.

Mr. Chairman, last week you and 12 of your Senate colleagues asked the President to implement emergency measures to divert additional water from the Great Lakes to the Mississippi River. We have urged the administration since the drought first took hold to undertake all necessary studies, plans and negotiations should conditions warrant diversion.

All of us are well aware that this proposal is steeped in controversy. Not only would it require agreement by each of the Great Lakes States, such a plan must be agreeable to Canada and blessed by the Supreme Court.

Lake Michigan is 950 feet deep and is, of course, connected to the other Great Lakes' vast reservoir of water. Increasing the amount of water diverted from Lake Michigan from 3,000 cubic feet per second to 10,000 cubic feet per second would increase the water level at St. Louis by one foot and at Vicksburg by six inches, at the "expense" of a 1 to 1½-inch drop in the level of the Great Lakes. Some claim that such river level increases are insignificant. Pose the choice to a river pilot and you will discover that just one-half foot will significantly improve the ability to navigate and lessen the need for and extent of emergency dredging. These added inches increase the flow of the river . . . the scouring action so important to cleansing the siltation that otherwise builds up and results in channel blockages.

This drought is an extraordinary situation and, as you and your colleagues have noted, in the absence of steady and prolonged rainfall, diversion could be the only measure possible to achieve the goals of water supply and quality, environmental protection, and navigation. It is imperative that all the preparations be in place so that once that decision is made, not one more day will be lost in making those plans.

I referred earlier to the ongoing AWO economic survey. Our data to date from that survey indicate that aggregate industry losses are running as high as $1 to $2 million per day, seven days a week. These losses will, of course, continue as the drought wears on. The transit time is now about twice as long for a barge tow to reach New Orleans from Minneapolis-St. Paul. Under normal circumstances this trip takes 2 weeks; it now takes 1 month or longer. We've all seen film clips on the national news of barges temporarily tied up near Greenville, Mississippi, Memphis and Mound City, Illinois.

Two sizes on the rivers are also restricted. That is, towboats which normally push 35 barges northbound can now push no more than 16 barges. Southbound barge tows, usually consisting of 30 barges, have also been limited to 16. Vessels which under normal operating conditions are loaded with cargo to 9 foot drafts, are now permitted to draw up 8½ feet. These restrictions are necessary for navigation safety; at the same time, they cut directly into the bottom line of every company operating on the inland waterways.

If the drought forces industry to operate through this September with the current restrictions still in place, we estimate a loss of $150 million or more. For an industry just now emerging from the savage depression of the early and mid 1980's, the drought is a sledgehammer blow. Many companies may not survive this, with the backdrop of a third of the industry having gone bankrupt in the depression of the decade's earlier years. Inland waterway operators, like the farmers and the Nation's agricultural infrastructure, appear to be in growing need of assistance from the Federal Government. Regrettably, because it would otherwise be simpler, we cannot link this needed assistance to an existing subsidy program; but our needs are no less acute.

AWO is surveying the industry to define, with care and precision, if Federal assistance is appropriate and, if so, how much is warranted. We stand ready to work with Congress to develop a package which justly compensates those companies who have and will continue to experience hardship as a direct result of the drought.

Mr. Chairman, this drought is not a river crisis, or just a potential problem for the Great Lakes. The stain of this national phenomenon will spread to all parts of our Nation. This is an American crisis, and we need to set aside regional differ-

ences, remembering the great American barn-raising ethic where neighbor helps neighbor when trouble comes.

AWO, for many years, has sought to expose the fallacy of the "pork barrel" label, wrongfully and frequently applied by misinformed critics of America's waterways. In all our experience, never before has the importance of America's rivers to America's economy been demonstrated so dramatically than in this time of growing crisis. The waterways are hardly a pig's trough; they are the arteries through which flows America's vital commerce.

Mr. Chairman, again we thank you for holding this hearing. I'm pleased to answer any questions you and your colleagues may have.

Senator BREAUX. Thank you, Mr. Farrell.

Mr. Zick.

STATEMENT OF JOHN ZICK, VICE PRESIDENT, NORTH AMERICAN GRAIN DIVISION, CONTINENTAL GRAIN COMPANY

Mr. ZICK. Thank you, Mr. Chairman.

I am Senior Vice President and General Manager of Continental Grain Company's North American Grain Division. I am also President of ContiCarriers and Terminals, Continental Grain Company's barge line subsidiary. In addition, I along with my family have farming interests in east central Illinois.

Included in my responsibilities with Continental Grain is the operation and merchandising of 22 grain elevators located on the Mississippi River or its tributaries, and the companies 500 barges and ten tow boats and one very large export elevator complex in Westwego, Louisiana.

As you know, the competitiveness of U.S. grain internationally is not only influenced by the fertile soils of the Midwest, but also by the grain handling infrastructure in place throughout the central United States.

A major factor in both the production and grain movement is the Mississippi River network, which not only drains, when it does rain, the major producing states, but also acts as the major conduit to move this production from the farm to the export markets.

Generally speaking, 50 to 55 percent of all U.S. grain exports move through the Baton Rouge-New Orleans ports. Throughout this river network, Continental Grain has put in place a highly integrated, finely tuned grain-handling and conditioning, grain logistics, and above all grain merchandising system which exports large quantities of grain as efficiently and competitively as possible.

Our export elevator, for example, has the capacity to unload 35 to 40 barges day after day, if demand warrants. Little or no rail is required at this facility. Capacity is normally fully utilized through barge unloads.

The volumes of grain exported through our Westwego grain elevator as well as through other export houses in New Orleans area are listed in attachment 1.[1] Of particular significance, notice the drop in overall volume in June. I suspect volume will drop also in July.

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[1] The attachment was not reproducible.

During the past four weeks, the low water caused by the extensive dry and hot weather has unfortunately caused the finely tuned logistics machine I just described to bump along like an old "Model T" and in some cases even worse than that. First, barges cannot be loaded to optimum draft, nine feet or greater, but rather to just eight feet six inches, which reduces the volume or bushels in a barge by roughly ten percent, as you talked about earlier.

Secondly, tow sizes handled by each tow boat have been reduced in size, from the normal 25 to 30 barges per tow to just 16, again reducing capacity by nearly 50 percent.

Thirdly and most importantly to us as a shipper, the turn-around time from St. Louis to New Orleans and back to St. Louis has gone from 16 days, which is the normal, to 30 days, which means less barges for the system, less empty barges for the system to load upriver.

What does all this mean to Continental Grain Company and the industry as shippers? Obviously, our overall costs of transportation have increased very substantially.

Secondly, timely movements of grain to meet designated vessels in New Orleans has been disrupted, meaning vessel demurrage, elevator down time, and generally less overall volume of exports through New Orleans.

In addition, the barge life itself suffers major inefficiencies and hence losses. For example, our barge line normally averages 200 southbound loads and 140 northbound loads per month. During the month of July, we expect at best to load only 120 to 130 southbound loads and 60 to 70 northbound loads, and of course all at reduced drafts.

Less loads naturally mean less income. But unfortunately, our costs do not go down. In fact, in order to meet these reduced projections, our reduced projections for July, we have had to charter two additional tow boats at a premium rate in order to meet these projections.

All in all, the barge industry, which had only begun to recover during the past 12 to 18 months from a very deep recession beginning in the early eighties, is now back in the red again.

The rapidly falling lower Mississippi River had a devastating effect on our June wheat harvest down South. At this point, we have handled only roughly 50 percent of our overall projections. The harvest started in early June in Memphis and by June 13th we were down to loading only two to three barges per day, versus a normal of eight or nine.

Barge drafts dropped to five and a half to six feet as we tried to keep up with the falling river. At one time, 19 loaded barges around our elevator in Memphis were unable to be picked up because of low water and heavy drafts.

As stated above, this created a great disruption in logistics and increased our handling costs in Memphis by eight to ten cents per bushel. At the present time,

We are unable to load any more barges at Memphis because of the low water and will have to load only rail cars, which decreases our loading capacity to only 15 percent of what could be expected by barge.

To better explain these conditions, I have submitted a set of photographs to the subcommittee of the Mississippi River and the Wolf River adjacent to Memphis, Tennessee. These pictures were taken in early July. As you can see, it looks like a beach and not a dynamic and free-flowing river.

We estimate the additional cost of operating in this environment to be five to ten cents per bushel, which ultimately is paid by the farmer in reduced grain prices.

In conclusion, the 1988 drought is having a dramatic impact on the way Continental Grain Company purchases, handles, merchandises, and transports grain. I do not have to tell you what the drought is doing to my farm.

While there is nothing we can do to influence Mother Nature, the shipping industry as well as various government agencies, including the Army Corps of Engineers and the Coast Guard, must communicate together, develop ideas together, and in essence work in concert to address the need to keep our rivers navigable and the grain flowing.

The industry, Corps of Engineers, Coast Guard working group organized by the American Waterway Operators is a step in the right direction to accomplish these objectives.

Mr. Chairman, thank you for the opportunity to appear before the subcommittee. We would be pleased to answer any questions if you have any.

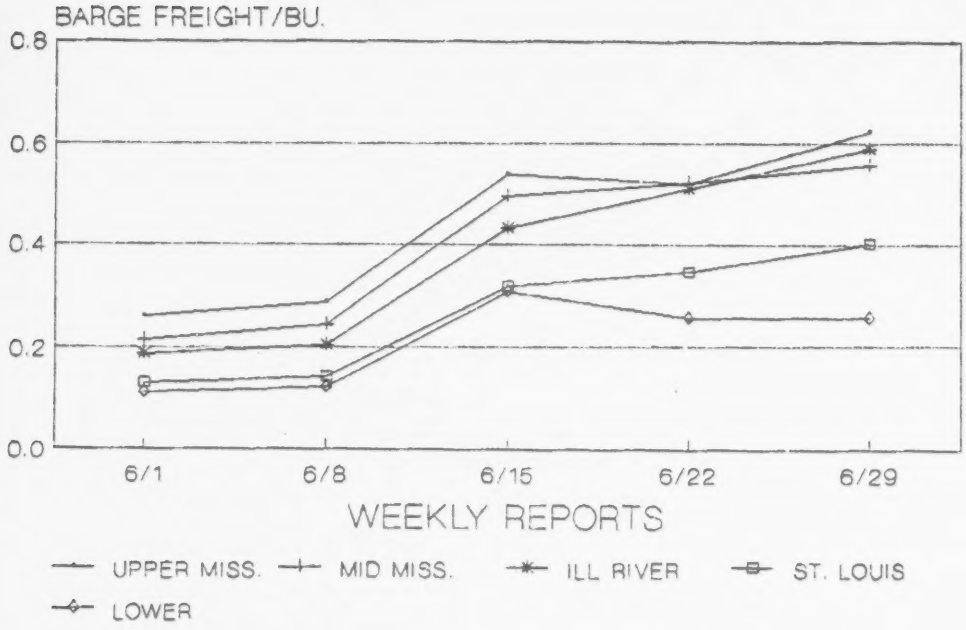
[The attachments referred to follow:]

ATTACHMENT.—BARGE TRANSPORTATION COST IN CENTS PER BUSHEL

	June 1, 1988	June 8, 1988	June 15, 1988	June 22, 1988	June 29, 1988
Upper Mississippi	26	29	54	52	62
Middle Mississippi	22	24	50	52	56
Illinois River	19	20	43	51	59
St. Louis	13	14	32	35	40
Ohio River	14	14	33	33	33
Memphis	11	12	31	26	26

ATTACHMENT II(a)

BARGE FREIGHT
CENTS PER BU.



Senator BREAUX. Thank you very, very much, both of you, for being with us.

The Secretary pointed out some interesting facts when he pointed out that at one time 130 tows were stacked up and waiting, and if you can figure that each tow had approximately 30 barges in the tow, which would be the common size, it would take 234,000 semi tractor trailer trucks to move that equivalent amount of material.

It would be enough trucks to stretch from New Orleans to Portland, Oregon. Or it would equal 58,500 railroad cars to handle that much; if you stretched them out, it would be from New Orleans to Kansas City.

I have had letters, however, from railroads saying that, look, it is no problem, we can handle all the transportation needs if the waterways were to be shut down. I am not hearing that from either you, Mr. Farrell, or Mr. Zick. It just does not work that way.

Mr. FARRELL. Well, I think obviously you two Senators know that the rail and water modes are fiercely competitive. The American consumer is the winner in that competition. That is a good thing.

I think you would have to ask the rail industry to explain how they could pick up all the water traffic. That does not seem feasible at all to me. And in the end, even if they could, that is probably not in the best interests of the American consumer at all.

Competition is what pays off for all of us citizens.

Senator BREAUX. Mr. Zick, you have talked about availability in your testimony. What about it?

Mr. ZICK. Well, I was going to just make one point, Mr. Chairman. 130 tows with roughly 25 to 30 barges, each tow would complement roughly one vessel loading in New Orleans or roughly a million to a million and a half bushels.

The problem that we have, that the grain industry has, is that the infrastructure both on the river system and also in New Orleans is really established to handle barges. It was established around the river system, as I pointed out.

Yes, railroad service does complement the barge industry, but the primary means of transportation and the most efficient and cheapest, if you will, is water transportation.

I can speak for ourselves. We normally move very little grain by rail to our New Orleans elevator. Presently, we are moving on a daily basis roughly 1,000 to 1100 cars. We are doing this in order to meet our sales commitments. But our elevator, for example, can only handle—can produce only about 50 percent capacity by rail unloads.

Most other grain elevators in the Baton Rouge-New Orleans area have the same problem.

Senator BREAUX. Senator Danforth.

Senator DANFORTH. Mr. Farrell, are you concerned about the long term health of your industry? You testified that you had some hard times in the 1980's, the early part of this decade, and you are beginning to see a little sign of light at the end of the tunnel, and then this.

Should we be concerned about the overall health of the waterway system and the barge industry?

Mr. FARRELL. I think you need to be in the short term and not in the long term, Senator. This natural phenomenon we are experiencing now is going to stretch out the recovery time of the industry.

But in the light of demand for the barge line services in the long term, I do not think there is anything to be concerned about at all.

Senator DANFORTH. There are certain companies that are very vulnerable now, are there not?

Mr. FARRELL. Yes, and typically they tend to be the smaller ones, of course. I think it is in all of our interests, frankly, to maintain the health of this industry, which includes the little guys as well as the big ones.

Senator DANFORTH. Just one other question. The Department of Transportation testified about the possibility of cost relief, and apparently the Administration is, at least for now, opposed to it.

Is this something that we should be on right now with Congress? Should we be pressing ahead with some sort of relief, temporary relief from the user fee? Or should we be keeping our powder dry?

Mr. FARRELL. I think keeping your powder dry until we know more about the real situation, Senator.

Senator DANFORTH. Thank you.

Senator BREAUX. Well, I appreciate both of you gentlemen for being with us and for those statements. I think it has been very helpful to outline the problem, that it affects transportation and not just one segment.

Senator DANFORTH. I just want to say one thing to Mr. Farrell. I really appreciate your candor. I think that many, many people would come into a Congressional hearing at a difficult time like this and just say, the sky is falling, do this, do that.

I think your basic approach has been one that is very, very sensible, and I appreciate that.

Mr. FARRELL. Thank you, sir.

Senator BREAUX. I would echo that.

Thank you, gentlemen, for being here.

Let me welcome now our final panel, consisting of Mr. Ron Brinson, who is President of the Port of New Orleans, and Mr. Herman Schoenberger, who is Presidential Aide to the Plaquemine Parish Commissioner of Government. I understand you may have someone accompanying you, and you can bring him up, please, if you do.

And Mr. Tony Moulton, who is Assistant Director for State Planning with the State of Missouri.

We are pleased to have you gentlemen and look forward to your testimony. Ron, we have you listed first. If you would go ahead and kick it off.

STATEMENT OF RON BRINSON, PRESIDENT, PORT OF NEW ORLEANS

Mr. BRINSON. Thank you, Mr. Chairman, Senator Danforth.

The low water conditions in the mid-America river systems is definitely impacting the flow of commerce through the Mississippi River ports of Louisiana, and particularly the port of New Orleans.

The cumulative effects are being substantially mitigated and in our opinion do not yet constitute an operational crisis at our port. And while there are reasons to be guardedly optimistic, we know that the future is at best uncertain.

Nearly 150 million tons of waterborne commerce flow through our ports each year by the Mississippi, and approximately 51 percent of this tonnage is handled by barges, barges which connect our port with ports of the mid-America river system and with other U.S. ports and with virtually every other major port in the world.

Our port, as an important service hub for the transportation system and as a generator of regional economic benefits, is vitally dependent upon the adequacy of the river system and the capabilities of the barge and tow boat industry.

While the operational problems attendant to maintaining the navigability of the river systems are being addressed, and I would say effectively, by the Corps of Engineers, there is a growing anxiety among shippers and carriers concerning the reliability of the river system to conduct their shipments within acceptable time schedules.

We find that the noticeable impacts on the flow of commerce at our port are as much attributable to this anxiety as to the operational problems at hand. And I would suggest that this aspect of the problem cannot be understated.

At the port of New Orleans, there is a definite shortage of barges, which in turn has created some delays in deep draft vessel operations. We are having some reductions in controlling drafts at some primary berths, and this problem is being addressed by port dredges, at considerable cost to our port authority.

There have been very, very few, if any, effects on the movement of deep draft ships between our port and the Gulf of Mexico. But we know that some grain shipments which would ordinarily be handled by barge down the river to New Orleans are now being diverted to Northwest ports, to Great Lakes ports, to East Coast ports.

And it is difficult to measure these diversions while they are occurring, but we know for a fact that they are taking place. So Mississippi River coal export shipments, which have grown steadily in recent years, are now being diverted to the Tennessee-Tombigbee waterway system, outbound through the port of Mobile.

As we have heard already, the use of the rail mode has increased significantly, and our port's principal grain elevator has reported a tenfold increase in the use of rail cars over the last 30 days. And thus, even as we are dealing with a shortage of barges, we now have a shortage of rail cars.

Over time, these conditions lead to direct increases in costs to the shippers, and thus they tend to compound the results of the operational problems throughout the river, but also they tend to compound the trend of cargo diversions. The barge industry is working earnestly and in concert to assure an adequate level of service to shippers, and our port authority has been monitoring the river conditions and the impacts on commercial activity on a daily basis.

We are seeking ways to mitigate problems for our shippers, the barge lines, and ocean carriers. For example, when transfer of cargoes from barge to rail at our port is indicated, we have undertaken special efforts to assist the shipper in accomplishing this.

And last week our board approved special initiatives that would make available all open and covered storage for the contingency planning of our shippers and carriers. And we are now in the process of finalizing tariff charges designed to partially mitigate higher costs which users of our port might experience as a result of these river conditions.

The port of New Orleans, though, in providing a structure of conduit services for waterborne commerce, also provides direct and indirect employment for some 67,000 persons throughout our state of Louisiana.

The economic benefits associated with port activities are thus readily apparent, and any negative impact on the flow of commerce through our port is in fact a negative impact on the already strained economy of greater New Orleans and the state of Louisiana.

But we also recognize that the importance of the river system extends far beyond the boundaries of our port, and indeed our state. The mid-American river system handles more than 400 million tons of domestic and international commerce annually.

The orderly flow of this commerce is absolutely vital to the economic and strategic defense needs of the United States. And clearly, the problems of navigability of the river systems deserve the immediate and careful attention of Congress and the Administration, which of course it is receiving here today.

Now, I think we can share the view that the river is likely to get a little bit lower before it begins to rise again in the fall, but that the operational reliability of the barge industry should increase consistently. If so, this would be owed to the continued good work of the Army Corps of Engineers and the determination of the barge industry to overcome these very serious problems and ensure the highest possible levels of service.

The initiatives of the Corps and our barge industry could certainly be enhanced by a number of actions, and we believe that one of those actions would be the release of some Great Lakes flows down the mid-America river systems.

In summary, Mr. Chairman, we think there is reason to be cautiously optimistic. There is a consensus in our community now that when we use the term "cautious optimism' that we should emphasize caution.

We are dealing with operational problems and we seem to have them in hand and to a large extent under control, and there is every reason to believe that these operational problems throughout the system can somehow be mitigated until we see increased flows.

We must not underestimate, though, this problem of anxiety in the marketplace, the perception among shippers that the river has somehow become incapacitated for a long period of time.

We are dealing here with the loss of economic impacts, economic impacts on our community, in our state, throughout all of the United States. We are dealing with higher costs throughout the transportation system, the cumulative impacts of which we are going to really have to study to fully understand, cumulative impacts that will undoubtedly impact U.S. positions in various international marketplaces.

I would like to echo something that Mr. Farrell said. At this time of crisis in our river system, what we really have is a laboratory to study the importance, the importance not only of the river system but also the importance of waterborne commerce to the wellbeing of this country.

We have a chance to study and to understand that which is not always fully understood in the structure of public policy, and that is the fundamental importance of the rivers, the barges, and our ports.

And as you said, Mr. Chairman, not only to Louisiana, not only to the United States, but the entire world. The situation of course is quite clear. We have some serious problems, but I think at this point in time we can also take notice of the fact that it could be a lot worse.

Were it not for the very timely and effective action of our Corps of Engineers and, yes, the supportive response of Congress, we really would have a penetrating national crisis.

Thank you for allowing us to come before you today.

Senator BREAUX. Thank you, Mr. Brinson, for a good statement.

Mr. Schoenberger, we are glad to have you and Louis, who are here together.

STATEMENT OF HERMAN B. SCHOENBERGER, PRESIDENTIAL AIDE, PLAQUEMINES PARISH GOVERNMENT, LOUISIANA; ACCOMPANIED BY LOUIS PORTERIE, PORT ATTORNEY

Mr. SCHOENBERGER. Mr. Chairman, Senator Danforth: My name is H.B. Schoenberger. I am the chief executive assistant to Mr. Luke A. Petrovich, President of Plaquemines Parish Government.

Mr. Petrovich's appearance before you on this most important matter was preempted by the final settlement of some longstanding litigation involving millions of dollars that must take place in open public meeting of the Plaquemines Parish Council, previously noticed, as required by our local law, on the same date and hour as this committee meeting.

His statement will be presented to your committee by Louis Porterie, an attorney for the Plaquemines Parish and also for the Plaquemines Parish Port, Harbor, and Terminal District, who is certainly very familiar with the affairs of the Plaquemines Parish Port District and other parish problems.

Mr. PORTERIE. Thank you, gentlemen.

I would first like to ask that we deliver to the Chairman and the committee itself copies of this morning's Picayune newspaper reports that we picked up at the airport on our early flight, evidencing meetings that occurred at which General Sands was there and Secretary Page in New Orleans yesterday.

You had the First Congressional District and Second Congressional District Congresspersons there. It was very productive.

The purpose of our appearance here is set forth in a written letter that Mr. Petrovich—and I apologize for the typographical error that we missed on one of the committee members, that we did not catch that on the airplane. And that has been furnished to you.

Generally speaking, what we would like to point out in that report is that Plaquemines Parish lies astride the Mississippi River in its last 120 miles before it gets to the Gulf. That 120 miles is made up of 81 miles from the head of the passes to the lower reaches of the port of New Orleans, and the additional mileage that makes up the 120 is the passes itself into the Gulf of Mexico.

The previous testimony before you and the newspaper articles, a copy of yesterday's paper, gives you the pictures of the wedge that the Corps of Engineers is building below New Orleans and slightly below a place called Belle Chasse, Louisiana, which is the upper part of Plaquemines. It is a very effective matter.

We are here to thank the Corps of Engineers and our Congressional delegation particularly for having supported the legislation and the cost expenditures to improve the navigation of the Mississippi River by providing for a deepening to a 51-foot channel.

That has been—55-foot channel. That has been the subject of a contractual agreement for the first deepening down to 45 feet that is now in place, and in connection with that there are legal clauses that provide for mitigation of the salinization of the water that will occur through the salt water wedge, the water being heaviest, creeping up the river.

In support of that, the Corps of Engineers is right now, as you will notice from these newspaper articles—and there are Xerox copies because we could only buy two at the place where we bought them—furnished you, show that they are dredging and are bringing water, some 33.5 million gallons in barges that the Corps is paying for from upriver, where it does not have the salinity, down to help out not only the people of Plaquemines who are drinking it, but the refinery there.

You have one of the largest refiners at Sohio Alliance, and some chemical plants. And that is a very expensive process.

Do not forget that through this 120 miles of the river that goes through Plaquemines Parish, the habitable area is only about a half a mile or a quarter of a mile from the river. So it is heavily impacted.

The water plants along the river through the years have drawn river water, because you just do not have wells and you do not have reservoirs. You do not have any source except the river.

Unfortunately, you will note from the article in the paper that they have gotten to 1600 parts per million in the lower reaches of Plaquemines.

We want to thank the provisions of Congress and the Corps of Engineers for having provided this long range deepening of the river, because it will help the whole Mississippi River valley and the economy of this country. We are now shipping over a million tons of coal per month out of Plaquemines alone.

And when you combine that by year, it is equivalent to the total tonnage shipped by some of the major coal shipping ports on the Atlantic coast. Grain is shipped out of there, oil is shipped out of there. And the vessels that bring all of the cargoes in and out of the area from Baton Rouge to New Orleans, where there are many chemical plants and refiners, all go through Plaquemines Parish twice, once up and once out.

This deepening of the river is very important, and it is presently contracted to go to 45 feet. The wedge being paid for by the Federal government is very much appreciated, but it is a short term solution. And what we urge here today in this written report is that over a long term for a 50 year solution, that a provision of Congress that we would hope our good Senator Breaux and we hope our Congressional delegation would get behind would permit a plan that has been worked out together with the Corps of Engineers and the Port of Plaquemines.

It involves moving the water purification plants in lower Plaquemines up to the Belle Chasse area, using existing water lines and mains that go down to the areas where the salt intrusion is occurring below the wedge, below the wedge. The wedge is only a cure for part of the problem being built by the Corps.

And then from then on, having a permanent 50 year solution to the salt intrusion and fresh water problem, because it is dramatic there with this drought, but the problem has existed each year, whether you have the drought or not.

The estimated cost of that, as stated in this report, is about $18 million. The contract for the deepening of the river presently in place between the State of Louisiana and the Corps of Engineers for the 45 foot depth provides for an apportionment of that, and the wedge would be built by the Corps and the state would deal with the rest of it, but they would pass the cost on to the Corps.

And that is why they are hauling that fresh water in there. That fresh water serves not only the 30,000 residents of Louisiana in the permanent residents of Plaquemines; it serves some 15,000 people who work off of the shores of Louisiana out of Plaquemines, with which Senator Breaux is familiar and I am sure Senator Danforth has heard about it, in an offshore area called submerged lands that Congress provided years back, and properly so, that the royalties from those wells come into the general fund of the United States.

Fresh water for many of those wells that are producing, and the exploration and the facilities, to the tune of 3,000 to 4,000 people at least permanently, and in certain times more than that, when the activities are a little more vigorous, when there is more drilling than when the oil prices are low, is provided from fresh water in Plaquemines.

So it is a national effort. A lot of those workers come from as far north as northern Arkansas and even southern Missouri, believe it or not, because they commute down there, three weeks on and one week off.

And it lends itself to where farmers will do that. A fellow will have a brother-in-law that works the farm for a week and then they all work offshore for three weeks, because they are hard-working people.

So we urge that there be provided a long run solution to this salt water intrusion made dramatic by this drought, and that this $15 million approximately be found, so that a 50 year solution to this—so that they will not be having to haul that water at that great expense by those barges.

I have gotten off the record, but I believe I have gotten across President Petrovich's message. And we thank all of you, and you all come down to Louisiana some time.

Senator BREAUX. I will be there this weekend. Thank you, Louis.

[The statement follows:]

STATEMENT ON BEHALF OF LUKE A. PETROVICH, PRESIDENT, PLAQUEMINES PARISH, LA

Gentlemen, this statement is being presented to your Committee by a personal aide and Chief Executive Assistant to me as President of the Parish Government of Plaquemines Parish, Mr. Schoenberger, and by Mr. Porterie, an attorney for Plaquemines Parish.

My assistant, Mr. Schoenberger, is a retired sheriff of Plaquemines Parish and a retired, long-serving member of our State legislature.

Our attorney, Mr. Porterie, is very familiar with the affairs of the Plaquemines Port District and other Parish problems.

My personal appearance before you on this most important matter is preempted by the final settlement of long-standing litigation involving millions of dollars that must take place in open, public meeting of the Plaquemines Parish Council, previously noticed as required by our local law, on the same date and hour as this Committee meeting.

That does not lessen the importance of the thoughts and statements herein conveyed to this Committee.

Geographically, Plaquemines Parish in the State of Louisiana lies astride the last 120 miles of the entire Mississippi River valley and its tributary system as the mighty Mississippi and its Passes enter the Gulf of Mexico and thus the oceans of the world.

We remind all that the Mississippi River system includes the River itself to its headwaters in Minnesota through Missouri, Illinois, Wisconsin; its tributary rivers such as the Red—with its headwaters on up into Arkansas and Oklahoma; the Arkansas River with its headwaters on through many states, including Oklahoma and on into Colorado; the Missouri River with its headwaters through Missouri, Kansas, Nebraska, South and North Dakota, and Montana; the Platte River on through Nebraska and Wyoming; the Tennessee River; and the Ohio River—all traversing the central part of our Nation.

In summary, the Mississippi River and its tributaries form a drainage and navigation system to the Gulf of Mexico for the entire continental United States lying between the Rocky Mountains on the west and the Applachian Mountains on the east.

All of this culminates and passes through 120 miles of the River's course through Plaquemines Parish; a Parish habitated (in round numbers) by 30,000 permanent residents and citizens and another 15,000–20,000 people who work from Plaquemines Parish in the vast, off-shore submerged lands that not only produce the major share of the oil and gas of the continental United States but provide oil royalty revenues to all 50 states from the efforts of those working out of and based in Plaquemines Parish for the exploration in the Gulf of Mexico from south of Mobile, Alabama, all the way to Corpus Christi, Texas, but with the predominant area of production lying south of Plaquemines Parish, Louisiana, in the Gulf.

Relate this 120 mile distance to where we are sitting today—in Washington, D.C..

Harrisburg is 116 miles from Washington; Richmond is 109 miles from Washington; Baltimore is 39 miles from Washington; the Atlantic Ocean lies within 100 miles of Washington.

Plaquemines Parish, while covering a vast land area, has a habitable area for its 120 miles along the River (as you will note from the Louisiana map) that is habitated for only ¼ to ½ mile from the River along each side of the River.

Every vessel carrying every ton of cargo from throughout the Mississippi River Valley, in and out of that valley into world commerce through the mouth of the Mississippi, passes through Plaquemines Parish twice: one as the vessel enters from the world's oceans and the Gulf of Mexico going upstream to the deep water ports on the River and conversely, as such vessels take on for export manufactured goods, raw materials, and agricultural products, they descend the River to pass through the 120 miles of the navigable waters of the Mississippi River lying within the confines of Plaquemines Parish on out into the world's centers of commerce.

This geographical introduction is made to point out the significance to our country as a whole, to its economy, to its national defense, its farms, its factories, its raw materials, of the commerce and navigation upon the Mississippi River that must pass through Plaquemines Parish.

We have always strongly recommended navigation improvements to the Mississippi River and the passes through its mouth lying within Plaquemines Parish.

Plaquemines Parish has created a Port, Harbor and Terminal District that has withstood the test of legal challenges and currently exports well over 1,000,000 tons of coal per month. That coal comes from throughout the Mississippi River Valley. That level of coal export equals the amount of coal shipped from some of the larger,

east coast coal ports and states. Incidentally, many vessels taking on coal bring in other world commodities to the vast chemical complex that lies on the lower Mississippi River from Baton Rouge, Louisiana, located at Mile Post 255 above the Head of the Passes, all the way down to the mouth of the River.

The United States Congress and the Executive Department, including the Army Corps of Engineers, after years of effort finally culminating in appropriation of monies, provided for the ultimate deepening of a channel in the Mississippi River from Baton Rouge, Louisiana to the Gulf of Mexico to a depth of 55 feet.

The first implementing step for that deepening was a 1987 contractual agreement between the State of Louisiana and the Federal Government represented by the U.S. Corps of Engineers as authorized by Congress, providing for the deepening of the River to 45 feet.

Much of that work has been accomplished in the lower Mississippi, and in that agreement the state and federal governments provided for the financing of the envisaged salinity problem that such a navigational depth might impose upon, and has now imposed upon the lower Mississippi River navigational areas and particularly the 120 miles of River lying within Plaquemines Parish. (The upper limit of Plaquemines Parish is at Mile Post 81, the lower limit of the Port of New Orleans; the remainder of the naviagtional area of Plaquemines Parish is below the "Head of the Passes", the passes out into the Guld of Mexico.)

All of you are aware of the current low levels of the Mississippi, not only through its lower reaches but within its upper reaches, which has prompted questions as diverse as proposing that water be diverted from the Great Lakes to the Chicago River to increase navigability, and which low levels have caused the Corps of Engineers to undertake emergency dredge work to facilitate navigation on the River.

Right now these topics are front page news, along with, as evidenced by the copy of the New Orleans newspaper's prominent article, the salinity problems facing the population areas in the vicinity of New Orleans (at Mile Post 81 above the Head of the Passes) on down to the Gulf of Mexico.

That dredging work is greatly appreciated, but more importantly, the U.S. Corps of Engineers, on an emergency basis, is currently providing barges to pick up water with less of a mineral, saline content from upper reaches of the River and transporting that water to the water plants within the 120 mile reaches of Plaquemines Parish.

This effort is greatly appreciated.

This effort is also a temporary solution to a long-range problem.

As stated, Plaquemines has always supported navigational improvements to the River and is very aware and appreciative of the benefits to commerce that those navigational improvements have caused. But it must also be recognized that when improvements to navigation are made the other side of the coin is creation of environmental problems.

Our appearance here today is to urge federal support of long-range projects to supplement and implement a solution to the problem created by the effects of the essential navigational improvement of the lower Mississippi River occasioned by the 45 foot deepening and the authorized 55 foot navigational deepening of the lower reaches of the River.

Plaquemines has always recognized the salt water intrusion problem in the lower reaches of the Parish and has acted to mitigate that problem with creation of reservoirs at Boothville, Louisiana, in the area most affected by salt water intrusion.

That reservoir, as evidenced by the necessity of barging less saline water by the Corps, is not now sufficient to provide a fresh water system to the citizens.

The long-range plan therefore here urged by Plaquemines is that federal participation by funding be recognized and implemented by Congressional action, to provide that the U.S. Corps of Engineers, pursuant to its commitment to improve navigation, also include in the cost thereof implementation of the financing of a solution to the long-term effects occasioned by that navigational deepening.

This would involve creation of a system of pumping stations and transmission lines from a freshwater intake plant at existing facilities in Plaquemines Parish in its upper River reaches in the vicinity of Belle Chasse, Louisiana (in the suburbs of New Orleans). The water thus obtained at that point from the river, with proper intake control, monitoring, supervision, and reservoirs, could be channeled throughout the Parish and we would then not be threatened by short-term and long-term cycles of weather and salinity intrusion from the Gulf of Mexico into the only water source of Plaquemines Parish, and the intrusion problem caused by the salt water wedge creeping upriver as it is now doing, would be more readily controllable.

Such a program is about a 50 year solution—at least—and it is anticipated that revenue from the federal government would match that of local government, with a

contribution by the federal government in the range of $11,000,000–$15,000,000 to match local funds contributing to the same cost.

It is to be remembered that the water plant thus provided upriver from the salt intrusion not only provides assistance to the local residents of the Parish impacted by the River and the deepening of the River, as above described, but that such a water plant would provide water to the some 3,000 service personnel involved at the Belle Chasse Naval, Marine, Coast guard, National Guard, and Air Force reserves base.

Also, the water from this plant supplies 2000–3500 personnel on offshore facilities exploring and producing oil and gas in the outer continental shelf and thus providing revenue through the Submerged Land Act to the U.S. Government. this includes the providing of fresh water for the production facilities, the platforms, and the persons working thereon.

All of these users of River water are imperiled in the lower reaches of the Parish without the suggested and rquested providing of funds sought by our appearance here.

In closing, we are representatives of the government and the citizens of Plaquemines Parish urge the continued improvement of the navigability of the Mississippi River for its contribution to the economy and national defense of the entire United States, but request that, as a cost thereof, it be recognized that this national effort requires some national contribution to the local water purification problems directly related to such navigational improvement, and that Congress address the same by appropriating general funds of the United States towards the solution of this impact problem that narrows and focuses on the area of navigational improvements; namely the 120 miles of Plaquemines Parish lying astride the Mississippi River as it flows to and from the Gulf of Mexico and oceans of the world.

Please support our Senator Breaux in this efforts to solve this national problem that has local impact as above stated.

NATIONAL
COAL
ASSOCIATION

COAL

RICHARD L. LAWSON
President
(202) 463-2647

July 22, 1988

The Honorable John B. Breaux
Chairman
Merchant Marine Subcommittee
Committee on Commerce, Science
and Transportation
United States Senate
425 Hart Senate Office Building
Washington, D.C. 20510

Dear Chairman Breaux:

I am writing to express the view of America's coal industry that exceptional actions are needed to deal with the effects of drought on navigation on the Mississippi River.

The river current has dropped substantially, and the depth of shipping channels also has declined significantly along with tightening of channel widths due to seriously diminished rates of flow. That has caused major impairments to the safety and the efficiency of barge traffic from the upper Mississippi River through its confluence with the Ohio River to deep draft ports on the lower Mississippi River from Baton Rouge to the Gulf of Mexico.

The inland waterways system, with the Mississippi as its major trunk for long-haul transportation, carries about one out of every five tons of coal produced in the U.S. for consumption by domestic utility and industrial plants and for export to overseas customers. Under normal circumstances, barge traffic is competitive, safe, and efficient. However, the effects of the drought have been serious in regard to river navigation, a situation which adversely affects the utilization of America's abundant coal reserves in fueling utility and industrial applications and in reaching export customers.

NCA believes it is imperative to dedicate high priority to the funding of extraordinary levels of effort by the U.S. Army Corps of Engineers in order to meet the exceptional strains placed on the navigational capability of the Mississippi River under the current emergency conditions attributable to severe drought. Therefore, we respectfully urge you and your colleagues on the subcommittee, along with the full Committee on Commerce, Science and Transportation, to furnish vital leadership by providing for rapid response by the U.S. Army Corps of Engineers to this critical problem by accelerated and concentrated dredging of river channels to preserve suitable barge operations on the Mississippi River throughout the drought conditions.

Sincerely,

Richard L. Lawson

Richard L. Lawson

1130 Seventeenth Street, N.W.
Washington, D.C. 20036-4677

(202) 463-2625

cc: Members of the Senate Committee

Plaquemines Parish Government

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Parish President
LUKE A. PETROVICH

August 1, 1988

Hon. John B. Breaux, Senator and
Chairman, Merchant Marine Subcommittee of
Senate Committee on Commerce, Science &
Transportation
United States Senate
Russell Long Senate Office Building
Washington, D.C.

Dear Senator Breaux:

At the above hearing a written statement was delivered on behalf of Plaquemines Parish by one of my personal aides and our port attorney.

At that time it was stated that supplemental information relative to the financial feasibility of the federal appropriation to the United States Corps of Engineers/State of Louisiana/ Plaquemines Parish would be furnished regarding long-range mitigation of the lower Mississippi River saltwater intrusion problem.

We propose a long-term saving by a capital expenditure instead of the current, high cost annual emergency expenditures to mitigate the saltwater intrusion resulting from and associated with the Mississippi River ship channel project from Baton Rouge, Louisiana to the Gulf of Mexico. That River channel deepening project is now funded by the 1985 Supplemental Appropriations Act, approved August 15, 1985 (Public Law 99-88) and provides for deepening first to a depth of 45 feet and ultimately to a depth of 55 feet.

The contract to deepen the river to 45 feet was made between the Department of the Army and the State of Louisiana through the Department of Commerce, dated June 30, 1986, a photocopy of which is enclosed.

In that agreement, as marked at Page 7, Paragraph 1. of Article II - OBLIGATION OF PARTIES, and at Page 14, Paragraphs a., c., and d. of Article VIII - OPERATION AND MAINTENANCE, the ultimate obligation for saltwater intrusion mitigation measures is first that of the United States Government, as to the mitigation sill. The obligation of the State of Louisiana to mitigate saltwater intrusion per that agreement is for the operation and maintenance costs for measures other than the sill, with a reimbursement from the Corps of Engineers provided for therein. In fact, currently the State's obligation is being fulfilled by the Corps of Engineers on a direct basis rather than being reimbursed to the State in this recent emergency of the current, extremely low stages of the Mississippi River.

A copy of the Plaquemines Parish statement at the above-referenced July 14 Subcommittee meeting was furnished at that meeting to General Sands of the Corps of Engineers to be shared with Assistant Secretary of the Army (Civil Works) Robert W. Page (the successor to Robert K. Dawson, Assistant Secretary who signed the agreement between Louisiana and the U.S. Government of June 30, 1986 for the River deepening for navigational purposes project).

The purpose of this letter is to support the verbal statement made to the Subcommittee of the financial feasibility, in the long-run, of a congressional appropriation for a long-time, 50-year solution to the saltwater intrusion problem, which is only highlighted by this year of the extreme drought.

Saltwater intrusion into the River has been an annual problem and is accentuated by the first 45 foot navigational deepening of the Mississippi River, and will be further aggravated by the further deepening of the river to 55 feet as provided by Public Law 99-88.

The navigational deepening of the River has been fully supported by Plaquemines Parish as stated in the above-referenced statement furnished to the Subcommittee on July 14, 1988.

Professional engineers of Plaquemines Parish have been in ongoing contact and liason with the U.S. Corps of Engineers local office and particularly its Chief Engineer, Mr. Frederic M. Chatry, and with Colonel Lloyd K. Brown, who will both be furnished with a copy of this letter and its enclosures together with the prior statement by us to the Subcommittee and the transcript of our appearance before the Subcommittee.

The most important attachment to this letter is a July 26, 1988 memorandum of engineers/consultants to Plaquemines Parish, Linfield, Hunter and Junius, Inc., on the feasibility of a one-time capital expenditure instead of a high cost annual water barging expenditure under emergency conditions.

It is our understanding that the Corps' engineers and our professional engineers concur that the most feasible long-term solution to the saltwater intrusion obligations of the Corps and the United States is a water plant improvement program in the up-River reaches of Plaquemines Parish (at Belle Chasse, Louisiana) which would solve the saltwater intrusion mitigation problem for 50 years by tying into the water transmission lines down River, all as more particuly described in the Linfield, Hunter July 26, 1988 feasibility analysis at Paragraph 10:

> "Plaquemines Parish has investigated alternate salt water mitigation plans and has concluded that the long term solution, which satisfies both the short term 45 channel project and the long term 55 foot channel project is to provide increased water treatment capacity at the Belle Chasse Water Plant at Mile 78 (10 miles above the sill), to construct additional transmission lines extendin; down river and booster pump stations permitting potable water to be supplied to West Pointe-a-la-Hache in times of need and then further down-stream to the Boothville system. This system of transmission lines and pump stations would be supplemented with reservoir capacity at West Pointe-a-la-Hache and additional reservoir capacity at Boothville should land become available for such installations. The cost of such a system (the Plaquemines Plan) has been estimated to have an initial cost of $18-20 million."

Senator BREAUX. Mr. Moulton, glad to have you here.

STATEMENT OF TONY MOULTON, ASSISTANT DIRECTOR FOR STATE PLANNING, MISSOURI STATE OFFICE OF ADMINISTRATION

Mr. MOULTON. Mr. Chairman, Senator Danforth: Thank you very much for the invitation to speak to you, and I will try to make it brief.

The gentlemen who are here with me at the table now and those who have preceded me earlier in the afternoon have covered a good deal of the subject matter that I was going to touch on. They have covered it in much more detail.

When I spoke with your staff the other day, he suggested that you might like to have a little bit of information on some other aspects, some of the problems, I guess, caused by the extraordinarily low river flows in the Mississippi and Missouri Rivers, and of course it is primarily the Mississippi valley area at this point that we are concerned about.

If you will allow me to proceed in a more or less conversational tone, I am going to sort of jump around in this little testimony that I prepared. There are I think three points I want to make at the very beginning.

The first is that the rivers are not only low, they are extraordinarily low. Now, that point has been made by a number of people here, and I think everyone seems to have a different way of counting exactly which the lowest year is. But someone earlier in the afternoon mentioned that the Mississippi is at a 100-year low.

And I spoke yesterday with a Missouri state hydrologist who agreed with that. He said that if you—the 100-year lows were recorded earlier, in the 1930's, the Dust Bowl years. And that of course was before the reservoirs and the flood control system was built on the upper Missouri.

So if you take out the water that's being contributed from the quantities being stored up there now, you almost certainly have a 100-year low. And it is 100 years only because that is the period of time in which it has been recorded. It may well be a 200-year low. We are not sure about that.

The second point is that the conditions that have caused the low river levels are continuing, and the problems that they are causing may deteriorate, may become worse, in the near future, and certainly in the long term.

And the third and obvious point, and the one which you gentlemen are addressing here yourselves, is the need to develop some kind of plan of action, some integrated manner in which the Federal government and perhaps the states can get together and do a little bit more than we are doing right now.

A great deal of the attention early in the afternoon, properly, was on the barge traffic. I will not try to repeat the nature of the problems that are quite clear to everyone in the room.

We did speak earlier this afternoon with the general manager of what is called the river terminal, which is a business that takes grain out of elevators and puts it into barges in Portageville, Missouri, which is in the Bootheel section, very close to Arkansas and Tennessee, and asked him just point blank, called him up on the phone with no lead-in and said: What are conditions down there?

And he said: Well, we are not in a crisis right now; if conditions do not improve substantially, we might at some point be in a crisis. But we are in some difficulties, and the difficulties are the same ones that were mentioned earlier.

They are loading today, they are loading barges with 70 to 75 percent capacity. Today their elevators are full. They cannot put any more in. They cannot get it out fast enough.

So there is a two hour old report from Bootheel, Missouri, on the current situation. That is anecdotal, but it is absolutely true and it is from the horse's mouth.

The nature of the problem is the barges—the channels are shifting. Sometimes the channels have disappeared, apparently, in the Memphis area. They are disappearing and reappearing elsewhere.

Barges are there to correct those problems, to recreate the channels, but the barges themselves in some cases unavoidably will slow down the traffic.

One of the consequences of the delays in the barge traffic that was mentioned earlier is a lower price for grain. What is happening, as I understand it, is what is called the basis—and that is the difference between the farmers get and the price that is quoted on the Chicago Board of Trade—is expanding.

And that seems to reflect at least two factors. One is the cost of transportation pure and simple; and the other is the cost of risk. And when barges go up on sand bars or when the turn-around time from St. Louis to New Orleans and back to St. Louis goes from 16 to, I believe the gentleman said, 30 days, then your risk is increased.

So what is happening is the profit margins that farmers could be making right now are being cut. And these are not only Missouri farmers—and I happen to be from Missouri. Those are the ones I am most concerned about right now. And that is at a time when, ironically, in some cases grain prices are going up.

But because the quantities that the farmers can get out there on the market are going down, they are being penalized very directly and in their pocketbook.

Let me switch, since the barge situation was covered in such detail, to another dimension altogether, and that is public drinking water supplies. That has been touched on a couple times this afternoon.

Public drinking water supplies are not at this moment in a crisis situation in the state of Missouri. The point in the future is visible, if you will, at which they could enter a crisis situation.

The city of St. Louis and some of the other cities up and down the Mississippi River and on the Missouri as well are finding that the quality of drinking water is deteriorating. That is noticeable to the people, the citizens who are drinking the water.

They are treating the water more intensively than they have been, and it is costing them money. It is quite ironic, as it turns out, that the ferrous sulfate, I believe it is, that the city of St. Louis is using as one of the purification agents arrives in St. Louis via barge. So it is a problem feeding upon itself, if you will.

We have many municipalities around the state, certainly in excess of 40 as of yesterday afternoon, which have water supplies that are being monitored very closely by the State Department of Natural Resources and the State Department of Health.

They, if you will, can see the horizon which, if current conditions continue, their drinking water will be endangered. Some of those, quite a large number, are fed in whole or in part by raw water intakes from the Missouri and the Mississippi, and Senator Danforth mentioned most of those municipalities earlier in the day.

I think the concern we have, to digress for a moment, is not only with the current situation, which is quite acute in some areas and again where the crisis horizon, if you will, is reasonably visible, but also with the longer term situation.

One of the gentlemen earlier mentioned the possible long term economic consequences if barge traffic is seriously and almost permanently impeded. Missouri, all of our neighboring states, and most of the agriculture producing states, grain producing states in the United States, as well as livestock producing states, have done a lot, to be precise, they have done a lot in the past few years to try to open up export markets, and have succeeded in many cases in opening up export markets that did not exist before and expanding foreign export markets in which we had a foot in the door earlier.

It would be tragic in my view if the continued delay and problems with the barge traffic were to cause those customers to consider our supply so unreliable or, as the case might be, so expensive that they would look for supplies elsewhere.

That would be a tragedy for each of the individual states that have been involved in these export efforts, as well as for the efforts the United States Congress and the Administration have put forward in the last few years.

We can see a similar situation in drinking water. We can identify potential problems now. We can identify very serious, although at this point fortunately only hypothetical, public health problems in the future if conditions remain as they are now.

Let me speak to another point, and I will be as brief as I can on this. Wildlife and fish populations has not been talked about very much so far. There has been one recorded large fish kill on the Mississippi River so far in that stretch of the river that borders on the state of Missouri. There may have been others. We may not have seen them. But that is one recorded, and we believe so far that that is the only significant one.

There have been many more fish kills of a smaller magnitude in some of the fresh water bodies elsewhere in the state, lakes and some of the smaller rivers and streams.

I think the entire community of biologists that is active in the area of wildlife and aquatic life is very concerned about the potential damage to water life.

In addition, there are very severe concerns in the same communities of specialists and in environmental circles about possible danger to the species that inhabit our wetlands. One of the not unimportant consequences of the drop in the level of both of the rivers we have been talking about this afternoon, and others as well, is that their adjoining wetlands, which in some cases have already been restricted over the last few years, are drying up.

Again, to use a clinical term, they are getting dry. And the habitat and the food and the shelter that the birds and the small animal species that inhabit those areas are accustomed to is not now what it was a few months ago, and if conditions continue will not be what it is now.

And that is a concern that I think we would all have, from many points of view, not least from the point of view of those who hunt and fish and who come into our rural areas in the state of Missouri and certainly in Louisiana and other states up and down the Mississippi for recreational purposes, to hunt, to fish, and for other purposes as well.

So those are a few of the topics that I wanted to mention to you. I appreciate the opportunity to do that. I did have a few other comments prepared, but I know you are trying to get out of here by 4:00 o'clock and we are well past that point.

Thank you.

Senator BREAUX. Thank you, Mr. Moulton.

Mr. Brinson, what about the cost? Is there any kind of cost impact on the port that you are seeing as far as the underutilization of the port that can be documented or assessed in some kind of way?

Mr. BRINSON. Actually, we are not in a position yet to begin totaling those kinds of costs. But it is costing the port authority a great deal of money to deal with these problems.

For example, the use of the dredge in maintaining berth drafts. So we are being impacted two different ways here: one, the requirement for fulfilling our responsibility to do extraordinary things to keep the port at capacity; and then we are also being impacted on the revenue side as a result of loss of business.

But on the revenue side, it is too early to quantify that.

Senator BREAUX. What happens with materials that would normally go through the port of New Orleans if it is being delayed and they shift? Where are they shifted to? To rail or to trucks?

Where does it go?

Mr. BRINSON. The bulk commodities, primarily grain and coal, when they are diverted they are diverted to other river systems or to rail, from barge to rail. We know for a fact that coal is being diverted to the Tombigbee waterway system.

We have documented some initial diversions, meaning that the shipper from very initial commitments to move the cargo chose to move it through a Northwest port or a Great Lakes port when traditionally he would have put it on a barge and sent it down the river system.

So the diversions can take many, many forms. We are just beginning now to see them and to document them. The economic impacts of those diversions will be a function of how long this lasts.

And I would say again, Senator, that I think one of the real problems we are dealing with here is the anxiety on the part of shippers. Shippers, once their cargo starts to move, they want to be pretty sure it is going to get where it is supposed to be going in a timely way.

And if there is any question about the capacity of the river, then that turns out to be a real negative in the marketplace.

Senator BREAUX. Let me ask you. The Corps tells us today that they could conceivably engineeringly get 10,000 cubic feet per second of additional water flow into the Mississippi River. What do your people tell you that would mean from a shipping standpoint?

Would it be helpful or would it not make any difference?

Mr. BRINSON. We think it would be very helpful. Our reading of the research today shows six to nine inches of an incremental draft, and that would certainly, if we had throughout the system an additional six inches of draft, that would certainly add to the capacity of the barges.

But I think there is another benefit to consider here, and that is that if it did nothing but hold the draft where it is now and not make the situation any worse, it would be worthwhile.

Senator BREAUX. I know a lot of people think that, well, six inches of increased water is not very much. But it really represents a significant additive from the perspective of the port of New Orleans, does it not?

Mr. BRINSON. It sure does, it sure does. And again, even if it did nothing but sort of sustain the capacity where it is now, it would be helpful.

Senator BREAUX. Mr. Porterie, Plaquemines Parish, I am of course very familiar with it. But for the record, I would imagine that all of Plaquemines Parish basically gets their water from the Mississippi River?

Mr. PORTERIE. Yes.

Senator BREAUX. And the lower parts of the parish now, are they relying completely on barged in water? Are they mixing it in their water system, the water that is being shipped in?

Mr. PORTERIE. Largely on barged in, but they have some reservoirs that were there for hurricane seasons and they are using those to dilute and they are holding their own. But the Corps has come in and is using barges, and they started that in the last 72 hours.

And the Corps is bringing water in to help dilute it, because that one place where it has gotten to be 1600 parts per million, the Boothville area, which is further down, reported in the article, and it is a little higher than some of these numbers.

It is 1200, for instance, as you get up to Port Sulphur, and these numbers are changing.

But the extreme cost to the Corps, we do not know what it is, but it is a lot for them to have these barges.

As to the port traffic, the coal people anticipated a growth this summer of coal to where it would have been a million to a million and a quarter a month. It was a million last year. It has stayed steady at a million, so the growth did not happen.

The grain of course is down, which is a combination of the shipping problem with the barges, but also the poor crop from the same drought. And they are way off from their shipping.

Senator BREAUX. What happens to the plants, refineries along the river that pull water from the river to run their refineries? What do they tell you?

Mr. PORTERIE. They are spending multimillions of dollars to hire private barges. I know of one place where two barges were brought from Tampa, Florida, at a cost of $18,000. And the Oronite plant, which happens to be at Belle Chase, which is where they manufacture, Chevron Chemical, the artificial odor that is placed in gas to make it safe in municipal systems, they are spending a half a million dollars between now and September for water up river that they are getting almost at Baton Rouge and bringing down, to keep them running their plants.

The same thing is true at Sohio, notwithstanding the Corps bringing water there. They cannot bring enough, and so they have barges and they are seeking water barges all over the New Orleans area.

You talk to people in the barge place and they are calling as far as South America and Mexico to try to find pure water barges, because they are hard to find. And they either have to have stainless steel linings or plastic.

And so, in addition to the municipal water supply that I mentioned to you, there is a heavy drain on industry on Plaquemines Parish, of which there are several plants, with which the Senator is familiar.

Senator BREAUX. Senator Danforth, any questions?

Senator DANFORTH. Well, I want to thank my constituent, Mr. Moulton, for coming all the way from Jefferson City to testify about the condition of the river. I think you have added some testimony on features that we really hadn't yet considered.

We talked a lot about barge traffic and we talked somewhat about water supply. But the whole question of the wetlands—would that be permanent damage in your opinion that would be rendered by this drought?

Mr. MOULTON. I would have to confess that I spoke briefly with one of the state biologists about that yesterday and I did not ask that question. My impression was that they were concerned about a short term impact at this point.

Senator DANFORTH. And do you confirm what was told to us earlier, that the situation on the Missouri River is pretty good right now and the real problem is on the Mississippi?

Mr. MOULTON. I think in terms of comparison with the Mississippi, that is probably true. The division of the Army Corps that, as I understand it, controls the flow, the release from the upstream reservoirs into the Missouri, is based in Omaha.

And they have issued a letter, I guess it is a determination in their terminology, recently declaring that they have—declaring the level of release that they plan on for the remainder of the summer and for the fall, and announcing also that they plan to end what they call the navigation season two weeks early this year.

Apparently it would have ended at the end of November. It will now end November 15th. And that they are going to delay the opening of next spring's navigation season by a week.

Senator DANFORTH. Why is that?

Mr. MOULTON. That, as I understand it, is so that they can restrict the flow of the release from the upstream reservoirs, primarily Gavins Point NE, to a level that will allow them to maintain the quantities in the reservoirs they think are necessary for the summer of 1989.

Senator DANFORTH. What do you think we should do, "we" being the Federal Government?

Mr. MOULTON. Well, first of all, it is interesting to me to watch you gentlemen taking this testimony and in your own minds obviously trying to figure out what we ought to do. It seems to me that—let me speak first to the condition inland, if I may.

The condition of crops, livestock, forage, and so forth is serious, obviously, throughout the Midwest. That can change to some extent, and this has been in the newspapers every day for the last few days, as different estimates and predictions come out. That can change depending on the frequency and the location and the duration of rainfall.

The extent—the impression I get from the testimony earlier this afternoon is that the river, the two river systems, in particular the Mississippi, are going to be less affected or affected less immediately by rainfall of that sort.

And the impression I get is that the Corps folks and the Coast Guard gentlemen who were here are thinking in their own minds in a longer term on sort of a level horizon, and that they think that there is a need for a sort of long term planning, not dependent on rainfall coming in at a certain level.

It was interesting that one of the gentlemen maintained that the Mississippi River channels will stay open, I believe was the statement. And that seemed to be a declaration of intent, as well as an observation of hoped-for fact. We certainly hope that will happen.

I do think we need to plan for the possibility that it will not happen. That there will be fluctuations that may interrupt barge traffic and that may have impact on the other dimensions I was talking about earlier.

It seems to me one of the things we might do is be sure, first of all, if I may speak to the Federal government in the guise of Congress, that the Federal agencies involved really are working together. My impression is they are, but the Corps of Engineers, through no fault of their own, is divided into districts, for one thing.

And the districts, as I understand it, have discrete authorizations by Congress, established by Congress years ago. Each district plans on water needs and tries to meet those in its region, as I understand it, somewhat, if not entirely, independently from the others.

I think some coordination—if that is the case, if my understanding is correct, then some coordination within the Corps or within the other Federal agencies that are active right now might be useful. Certainly coordination across their boundaries would be useful.

I think you may want to—I simply throw this out. You may want to consider various forms of Federal financial assistance, without trying to be one coming to Washington with a begging cup in one's hand. The barge industry has spoken to that issue today. Agricultural representatives have spoken to it in many other forums.

There are others affected—the river terminals, the port authorities, which are public entities, and which Missouri state government, by the way, and I am sure Louisiana and many other states help finance to some extent, although somewhat modestly.

The port authorities are all involved in the situation. I think it would be very useful if the U.S. Department of Transportation, if that is the proper agency, takes a close and quick look at the needs of those port authorities, where they stand in this situation and what they may need, perhaps not in the form of financial aid, but perhaps that as well.

So I think you obviously have a big menu ahead of you, and I am certainly not the wizard who can solve the issue right here. But I think certainly the coordination issue simply has to be done.

Information on time from the Federal agencies to local governments and to state governments and to the private sector is critically needed. We need to know when the river is going to be at a certain height. The barge operators need to know that.

Senator DANFORTH. And they do not now?

Mr. MOULTON. I do not know that they do, Senator. They may know that, but the city of Cape Girardeaux needs to know what the river flow is going to be, because I believe we have three and a half feet of water now above their raw water intake from the Mississippi River.

They are planning to—I think it is at 4.7 feet, and they are planning to institute emergency procedures, emergency pumping procedures, when it drops to 3.5. Well, that is a foot and a half. They may not have it overnight, but they need advanced information very quickly.

Senator DANFORTH. Thank you very much.

Mr. MOULTON. Thank you, sir.

Senator BREAUX. Gentlemen, we thank you very much for traveling a long distance on the part of all of you to be with us. I think your perspective on it from a local level has been very, very helpful as we try to come up with some solutions and make sure that the Federal agencies are doing what they need to do.

That is a commitment that I think this committee and Senator Danforth and I certainly feel very strongly about, to make sure that the Federal Government is doing our part. We cannot make it rain, that is obvious. But we certainly can ensure that the Federal government is doing what is within our capacity to alleviate the problems and prevent them from getting worse and making things better.

So we thank you very much for being with us and that will conclude this hearing, the committee will stand in recess.

[Whereupon, at 4:40 p.m., the subcommittee was adjourned.]

ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

STATEMENT OF HARRY N. COOK PRESIDENT, NATIONAL WATERWAYS CONFERENCE, INC.

The overall economic impact of low water on the Lower Ohio and Middle Mississippi Rivers can be only partially estimated but an economic assessment by the National Waterways Conference, Inc., indicates that losses "clearly must be measured in the tens of millions of dollars."

The study shows that lighter loads to reduce barge drafts and restrictions on the number of barges in each river tow has cut bargelines' revenues by 25 to 30 percent, or an average of about $8,950 per tow. In addition, some tows are being delayed by as much as 100 hours per trip, increasing operating costs from $21,000 to $42,000.

"To this must be added the costs to shippers and receivers of low-water delays unpredictable as to occurrence and duration," the Conference's report states. Widespread costs are being imposed on farming, petroleum fuels, coal, chemicals and steel shippers.

The study found that "operations of such establishments as oil refineries and electric generating stations are being curtailed or suspended in increasing numbers with the interruptions of scheduled deliveries, as the cost to the national economy mounts beyond available estimates."

The economic assessment follows:

LOW WATER ON THE MISSISSIPPI AND OHIO RIVERS: ECONOMIC IMPACT ON MAJOR COMMODITY MOVEMENTS

Low water on the Middle Mississippi and Lower Ohio Rivers imposes widespread costs on the waterway carrier industry and on shipping and receiving communities, particularly with regard to farming, petroleum fuels, coal, chemicals, and steel, as well as ports and terminals, waterway services and other economic segments dependent upon water transportation.

WATERWAY CARRIERS

The barge and towing industry is only now recovering from persistent severe losses and bankruptcies of the early and mid-1980,s. Delays caused by low water are a serious setback. Water carrier executives report that operating costs of a line-haul towboat fall in the range of $5,000 to $10,000 a day, an average of about $300 an hour. On the Mississippi River there are about 84,000 shallow-draft towboat movements each year. Should delays continue throughout 1988, the cost of each hour lost by 84,000 movements during the year would thus amount to something over $25 million. As much as 100 hours per trip are being lost under present conditions. In addition, the reduction in the number of barges per tow and lighter loading reduce revenues by some 25 to 30 percent with little, if any, cost reduction. It is obvious that the consequences are severely injurious to the barge and towing industry and costly to the widespread economic activities which rely on it.

AGRICULTURE

Farming throughout the Upper Mississippi Basin is especially affected. Low water is impairing farm income by the higher costs of moving farm crops to market, notably to Gulf Coast ports for export. In a typical recent year, about 1.4 billion bushels with a farm value exceeding $4.0 billion were transported on the Mississippi.

The low water impact is measured by the higher barge quotations reported by the Merchants Exchange of St. Louis. In June 1988, these are running in the general range of 125 to 200 percent of the basis trading benchmarks. A year earlier, they were only in the range of 105 to 117 percent. The net effect is a farm price reduction of between 3 cents and 10 cents a bushel. Because prices are largely determined in the world market, most of the cost falls on the price realized by the farmer. The loss is partially mitigated by increased rail shipment, but only to the extent that rail cars are available. Furthermore, many country elevators do not have rail connections.

Low water is also raising farm costs of fertilizers and fuel. The Mississippi River carries some 9 to 10 million tons of fertilizers each year, mainly northbound from Gulf Coast origins. Gasoline and fuel oil for farm trucks and tractors are also affected.

The farm regions subjected to these losses include Kansas and Nebraska via the Missouri River, as well as Minnesota, Iowa, Wisconsin, Illinois, Indiana, and Ohio via the Illinois, Upper Mississippi, and Ohio Rivers.

PETROLEUM FUELS

The higher cost of gasoline and fuel oil affects both rural and urban consumers. Shallow-draft vessels on the Mississippi carry some 3.1 billion gallons of gasoline yearly, mainly from Gulf Coast and Mississippi Valley refineries to consumer outlets throughout the multi-state basin. As a measure of magnitude, this is equivalent to about 150 percent of the total gasoline consumption of the State of Minnesota.

Diesel and other fuels are similarly affected. In a typical recent year, shallow-draft barges on the Mississippi carried some 35 million barrels of jet, diesel, and other distillate oils, in addition to about 70 million barrels of residual. Not only are these critical fuels subjected to the carrier costs of delay which have been cited. In addition, interest, insurance and other costs are incurred on inventory immobilized on the river. The gasoline and fuel oils moved on the Mississippi in a typical recent year had a value at posted 1988 tank wagon prices of about $4.7 billion.

COAL

Coal combines with petroleum fuels to make the Mississippi River a major artery of energy distribution. In a typical recent year, the main stem of the Mississippi carried about 43 million tons of coal. About 60 percent of this originated in the Ohio River Basin, destined mainly for electric utilities in the Lower Mississippi Valley and on the Gulf Coast, principally in Alabama and Florida. The Ohio Basin coal, of course, is affected by low water, not only on the Mississippi, but also in the Mound City reach of the Lower Ohio. Most of the remainder of Mississippi River coal (about 33 percent) originates in the State of Illinois in the vicinity of St. Louis.

One large coal carrier reports low-water delays of four to five days. At the approximate average carrier cost of $300 an hour, a delay of 4-1/2 days would incur a loss on a single tow of $32,400. The average all-commodity downbound tow on the Mississippi in a recent year was 12,314 tons and, on this basis, the cost of the coal delivered to the electric utilities would be increased by about $2.60 a ton. Should low water affect all coal shipments on the Mississippi to this extent, the total cost in a year would thus amount to about $110 million, a cost imposed mainly on electric utility bills throughout the Mississippi Valley and on the eastern Gulf Coast.

CHEMICALS

Because of the innumerable products of the chemicals industry, both for industry and for household consumers, the cost of delayed chemicals shipments to the economy is highly pervasive. In a typical recent year, over 18 million tons of chemicals were carried on the Mississippi River (excluding chemical fertilizers). A large portion of the movement consists of crude chemicals and intermediates originating at oil refineries or mineral sources and transported by river barge to upstream plants for final processing.

The great chemicals complex of the Kanawha Valley of West Virginia is illustrative. There, plants receive major tonnages of crudes and intermediates by river, mostly from the Gulf Coast and lower river valleys, and ship products by rail and truck throughout the Northeast quandrant of the United States.

Low water delays are especially costly to the chemicals industry because of the immense investment in specialized vessels providing exacting standards of care, such as

high or extremely low temperatures, high pressures, and anti-corrosion protection. Furthermore, most chemicals immobilized by low water represent a very high investment. For example, sodium hydroxide was recently quoted in the range of $!95 to $270 a ton, and styrene at $720 a ton. obviously, the cargo of a single tow commonly represents an investment in the range of 52 mi)lion to $5 million. With high hourly costs of interest, insurance, and maintenance. The interest charge alone on 10,000 tons of chemicals at $720 a ton and 7 percent per annum amounts to nearly $1,400 a day.

STEEL

Like chemicals, waterborne shipment of steel merits special attention because of the high value of the cargo. A typical 10,000-ton shipment of pipe and tube, for example, has a value of about $6.4 million, representing an interest cost at 7 percent per annum of some $1,200 a day. The total value of steel shipped on the Mississippi River in a recent year exceeded $600 million. In addition, because of the wide variety of composition and shapes, steel inventories are highly sensitive to delivery interruptions.

These considerations are especially critical to waterborne steel because of import competition. Most of the steel moves from the Ohio Basin (including the Pittsburgh District) and from the Chicago and St. Louis areas downbound to the Lower Mississippi Valley and the Gulf Coast. It is thus in direct competition with Gulf Coast imports, and the persistence of low-water delays will inevitably erode sales volume in these markets.

OVERALL IMPACT

The overall economic impact of low water on the Mississippi can be only partially estimated, but it clearly must be measured in the tens of millions of dollars. Water carrier executives report that lighter loading and reduction in the number of barges per tow reduce revenue by some 25 to 30 percent. Estimated revenue per ton is published by the U.S. Department of Transportation, and the Army Corps of Engineers reports the number of annual tow movements on the Mississippi and the tonnage carried. On the basis of these data, the revenue per ton approximates $4.38 and a 25 percent impairment of tonnage would constitute a revenue loss of $8,953 for each tow movement. In the event the effects of the drought were to extend for a full year, the consequences of impaired navigation could approximate $753 million.

In addition, delays add to operating costs. Carrier executives report this in the range of $5,000 to $10,000 a day per tow, and typical delays of four or five days per movement. To this must be added the costs to to shippers and receivers of delays unpredictable as to occurrence and duration. These include interest, insurance, and value loss of immobilized cargo. Operations of such establishments as oil refineries and electric generating stations are being curtailed or suspended in increasing numbers with the interruptions of scheduled deliveries, as the cost to the national economy mounts beyond available estimates.

The negotiations and discussions occurring among the Corps, Plaquemines, and engineers (including engineers of the State) regarding such an improvement project have envisaged that of the estimated project cost of approximately $18-20 million something in the range of $1 million would be provided by the State, the Corps of Engineers would bear a portion of the cost in the amount of $11-15 million, and Plaquemines Parish would contribute the balance of $6-8 million.

The exact figure of the Corps' contribution has currently been stated to be $11.4 million, but not knowing when that would be forthcoming or when the project would be undertaken, and considering the steady trend of increased costs of this type of project, it is estimated that a Corps' cost-sharing portion of $15 million in the next couple of years would solve the problem at the lowest overall cost, compared to the cost of hauling fresh water by barge for the next 30-50 years.

This suggested Corps appropriation sought by Plaquemines Parish is a "permanent" solution. The commitments to the River deepening in the enclosed agreement, depending on the growth rate of the Parish population over the next 50 years, are estimated for the cost of piece-meal financing, by the Corps hiring water barges each year when the water is low to alleviate the problem, to be some $32 million - by the Corps' own current estimate.

That is why Plaquemines Parish urges that it is in the public interests, the interests of local government, the interests of the State of Louisiana and of the United States Corps of Engineers that a onetime solution by congressional appropppriation of $11-15 million, as stated in our appearance before your Subcommittee and as set forth herein, is appropriate for mitigation of saltwater intrusion resulting from the navigational River deepening work and its benefits to the overall Mississippi River Valley, including the ensuing economic benefits to all states located in the Mississippi River navigational system from the Gulf of Mexico to Canada and from the Rocky Mountains to the Appalachian Mountains.

We know that you, Senator Breaux, and the entire Louisiana delegation will find the appropriate way to address this matter with appropriate legislation to provide the funding for this project. We therefore do not suggest the mechanics of legislation to such skillful representatives as we have in the Senate and House but are sending copies of this letter and attachments to the offices of Senator Johnston and Representatives Boggs, Livingston and Tauzin, who are all familiar with the River deepening project, so that they will be aware of the overall feasibility of the proposed project contained in this letter as relating to that River deepening which is whole-heartedly supported by Plaquemines Parish.

Very truly yours,

LUKE A. PETROVICH, President
Plaquemines Parish, Lousiana

Enclosures. 1/

1/ The enclosures were not reproducible.

UNION ELECTRIC COMPANY
Cape Girardeau, July 12, 1988.

Senator JOHN C. DANFORTH,
U.S. Senate, Committee on Commerce, Science, and Transportation,
Washington, DC

DEAR SENATOR DANFORTH: Union Electric Company owns and operates the water system which supplies the City of Cape Girardeau, Missouri, with potable water. Cape Girardeau, has an estimated population of 36,000 and Union Electric has 13,135 water meters. Present daily water comsumption is between 5.0 and 5.5 million gallons.

The water system is served by two treatment plants. One plant utilizes a well for raw water and can supply 1.5 million gallons per day. The main plant uses the Mississippi River for water supply and supplies 75 per cent of the water for Cape Girardeau.

The Mississippi River intake structure is situated on the river bank and consists of a tunnel in bedrock which extends into the river and three large pumps which move water up to the treatment plant. The top of the intake tunnel is exposed when the river level reaches 3.5 feet on the Cape Girardeau gauge. At 2 feet on the Cape Girardeau gauge, water will no longer flow into the intake tunnel from the river and our main plant will then be out of water. This, or course, cannot be allowed to happen.

We have an emergency plan which will be activated when predictions indicate the river will drop to 3.5 feet or lower. Three large diesel driven pumps will be moved to the river bank, two of which will need to be operated continuously in order to adequately supply the treatment plant with raw water. Under this emergency plan we would also anticipate making a request to restrict use of water by customers as it will be necessary to keep the system storage as full as possible for emergencies. Plans for a mandatory ban and restricting industrial use of water are also being made.

If it becomes necessary to start pumping water into our intake tunnel, we would consider this as an extreme emergency as this introduces an extra unknown factor of reliability into our water treatment and supply. I would also point out that the Mississippi River stage is at 4.7 feet on the Cape Girardeau gauge having fallen from 5.7 feet on July 9. This first points out that even though the river is at record low stages, it is still subject to rapid fluctuations. Any reasonable effort to stabilize or raise the Mississippi River by reallocation of water should be considered and is encouraged.

Sincerely,

RALPH C. MAXTON, P.E.,
District Engineer, Gas & Water.

MERCHANTS EXCHANGE,
St. Louis, MO, July 12, 1988.

Senator JOHN C. DANFORTH,
U.S. Senate, Committee of Commerce, Science, and Transportation,
Washington, DC.

DEAR SENATOR DANFORTH: Your concern regarding the drought is timely and justified. The impact on the members of the Merchants Exchange and indeed the entire agribusiness community and our nation is dramatic and costly. The drought has already reduced crop yields, driven transportation costs higher and is threatening the economic health of agribusiness.

The Merchants Exchange is the center for trading barge freight service and grain delivered to the Gulf by barge. Over one half of the southbound barges on our river system haul agricultural products and the drought has jeopardized this by driving freight prices higher due to the logistical problems and navigational restrictions. On May 23, 1988 the cost of moving a bushel from Peoria, Illinois to the Gulf was about 18 cents. By late June the price had risen above 50 cents a bushel.

The reduced productivity of the fleet is a key element. Efficiency is down due to: lower barge draft requirements from 9 ft. 6 in. to 8 ft.; the reduced number of barges in tow from 40 on the lower river, to 16; the full-turn trip time has more than doubled; the navigation restrictions idling equipment and crews; and the increased damage to boats and barges.

This lack of productivity severely reduces the number of barges available and threatens industry compliance on contracts because the majority of the freight contracts were made before the drought was evident. The barge industry is cooperating with one another and the grain industry but the optimism expressed in April for a good year has turned to grim forbearance and the reality of heavy losses due to the drought.

The grain industry is also subject to this disaster. The dramatically higher barge freight has pushed bushels to other modes and even to be piled on the ground in the case of a recent soft wheat harvest. The demand for rail freight has escalated rates by 20% already and effective August 1st, 1988, a $104.00 per car increase will raise freight costs an additional 3 cents per bushel on some cars moving to southern export terminals.

The actual and projected reduction in crop yield will restrict the opportunity for the elevators and terminals to handle bushels and will push their per bushel costs higher. The lower yields will reduce revenues to the entire agricultural infrastructure, e.g., truckers, equipment dealers, etc. There are already concerns about sufficient water for corn and soybean processing plant operations. The seed industry is directly affected and farmers will have to pay more for reduced supplies of quality seed. There is legitimate conern that our high priced commodities have diminished demand and markets may be difficult to recapture—once again.

The problem of contract performance is not unique to the barge industry. The farmers may have problems filling contract obligations made prior to the drought. The severity of the drought in certain areas could negate performance and jeopardize deferred contracting which is imperative to the industry. Some old crop bushels are being carried now to fill new crop sales.

The Exchange and its members applaud your efforts to highlight the significant impact of this drought and hope you can focus some attention to the many areas and business sectors suffering from this natural disaster. If we can be of further assistance, please let us know.

Sincerely,

MORRIS L. LARSON.

STATE OF MISSOURI,
DEPARTMENT OF NATURAL RESOURCES,
OFFICE OF THE DIRECTOR,
Jefferson City, MO, July 12, 1988.

Hon. JOHN C. DANFORTH,
U.S. Senator,
Russell Senate Office Building,
Washington, DC 20510–2502

DEAR SENATOR DANFORTH: The Department of Natural Resources has been convening a Drought Task Force Committee since the first of June and is currently participating in the Governor's Cabinet Level Task Force. We have on a weekly basis been monitoring public water supply system problems, rainfall, streamflow and groundwater table levels. State groundwater levels are now at a condition comparable to that of the 1980 drought and are expected to further decline. Sporadic problems have been encountered statewide from shallow groundwater overdrafts. April 1st through July 3rd rainfall is only about one-third of normal for most counties north of the Missouri River. Streamflow records are below normal for June but are not at critical stages. Stream flow in the Mississippi River below St. Louis currently is at the second-lowest level on record for the month of June. Missouri River streamflow is about 40,000 cubic feet per second (cfs), 32,000 of which is being released from Gavins Point dam. Tributary inflows from Platte and Kansas rivers are much below normal and not expected to improve through summer months but thanks to main-stem reservoir storage, the Missouri River quantity and quality will remain satisfactory through the summer and fall. June river flows at the Mississippi River downstream of St. Louis are about 70,000 cfs, the second-lowest level on record; about 40,000 cfs of sustaining flows come from the Missouri River. Without this sustaining flow, the lower Mississippi would likely would be non-navigable.

Public water systems with shortages expected within the next 100 days are Harrison County PWSD No. 1, Grant City, Drexel, and Hamilton. About 15 more communities are expected to have water shortages if the drought should continue.

The Department of Natural Resources with assistance from the U.S. Geological Survey and the Soil Conservation Service is attempting to predict and mitigate water supply shortages.

I hope this information is helpful. If you have any questions, please feel free to contact me.

Sincerely,

FREDERICK A. BRUNNER, PH.D., P.E.,
Director.

NORANDA ALUMINUM, INC.,
New Madrid, MO, July 13, 1988.

Hon. JOHN C. DANFORTH,
U.S. Senate, Washington, DC 20510

DEAR SENATOR DANFORTH: Please accept this letter as Noranda Aluminum's statement of concern regarding the current drought condition existing in the Midwest and its possible impact on the economic welfare of both Noranda Aluminum Inc., its employees, and the surrounding area.

Noranda is designed for an annual aluminum production of 225,000 tons. In order to achieve such production, raw materials in excess of 500,000 tons must be received and processed. The only economical way to receive this material is via the inland water system or, more specifically, the lower Mississippi River. To receive this material by any other mode of transport (i.e. rail or truck) would increase our costs by anywhere between two and twelve times—depending on mode and origin of shipments. In addition, the design and layout of this facility is conducive to receiving this large quantity of raw materials by water. To accept these shipments via any other mode creates a strain on the capacity to feed sufficient raw material to our production cycle. Without the ability to receive barge shipments, Noranda would find itself in a crisis situation.

To date Noranda has been able to supplement its barge traffic with rail deliveries. Although we have only been receiving supplemental rail shipments for about two weeks, our costs have increased in excess of $250,000 over and above the cost of receiving material exclusively by water. If low water conditions force the barge operators to shut down in order to minimize their losses, we would be faced with supplying our entire raw material requirements by rail. Securing covered hopper rail care required could be an enormous, if not impossible task. If this situation had presented itself over the past three weeks, Noranda's freight charges would have been an additional $570,000.

Noranda Aluminum, Inc. employs 1,176 people with an annualized payroll of approximately $40,000,000. The impact of a possible cut back in production as a direct result of low water conditions must not be overlooked. This would have a devastating effect on the economy of the entire area. This option would have to be considered as a last resort measure, but not an inconceivable one. Precisely, Noranda and the surrounding area relys upon the Mississippi river for its economic viability.

Thank you for your attention and concern in this difficult time.

Yours very truly,

RALPH R. EBERSOLE,
Vice President, Operations.

DEPARTMENT OF PUBLIC UTILITIES,
St. Louis, MO, July 13, 1988.

Hon. JOHN C. DANFORTH,
U.S. Senate, Committee on Commerce, Science, and Transportation,
Washington, DC.

DEAR SENATOR DANFORTH: The extended drought in the midwest has resulted in significantly below normal river stages on the Missouri and Mississippi rivers in the St. Louis area. As a result, the Water Division has encountered certain operational problems as follows:

1. We are expending approximately $1,000.00 per day for addition of powdered activated carbon in the water treatment process. This additional treatment is being required to mitigate taste and odor problems, which would not ordinarily be present during normal river stages.

2. One of our drinking water purification chemicals, ferrous sulfate, is shipped up the Mississippi by barge from New Orleans. To date, delays in barge traffic have not created problems for us. However, should the river levels continue to fall and barging operations be further restricted to the south of St. Louis, an alternate source of transportation mode will be required for this important treatment addition.

3. Low river stages have resulted in substantially higher electric costs for the pumping of raw water from the rivers into our purification plants for treatment.

If we can be of further assistance, or if you require clarification on any of these points, please do not hesitate to contact me.

Sincerely,

DAVID A. VISINTAINER, P.E.,
Executive Engineer.

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